


1994-1995

Ivy Tech State College
Central Indiana Region

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IVYTECH
State College

Central Indiana Bulletin

1994-1995

Indiana's Two-Year, Community Oriented,

Technical State College

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Ivy Tech State College-Central Indiana Region

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Ivy Tech State College--Central Indiana

Ivy Tech State College offers degree credit programs, courses, career development and technical certificates, and community service offerings. The College provides open admission, counseling, and placement services for all persons, regardless of race, color, creed, religion, sex, limited English proficiency, national origin, physical or mental handicap, limited English comprehension, age, or veteran status.

Disclaimer

This catalog is intended to supply accurate information to the reader. From time to time, certain information may be changed.

The College may revise any matter described in this catalog at any time without publishing a revised version of the catalog. Information which appears to apply to a particular student should be verified by the Registrar's Office. This publication and its provisions are not in any way a contract between the student and Ivy Tech State College.

Equal Opportunity/Affirmative Action

Ivy Tech State College--Central Indiana Region fully enforces and supports equal opportunity and affirmative action. The College does not discriminate on the basis of age, race, color, religion, sex, disabilities, or national origin, including limited English proficiency, in any employment opportunity. No person is excluded from participation, denied the benefits of, or otherwise subjected to unlawful discrimination on such basis under any educational program or student activity.

If you believe you have experienced discrimination in educational programs or activities, direct written inquiries about available procedures or written complaints for consideration of alleged discrimination to the Director of Employee Relations, One West 26th Street, P.O. Box 1763, Indianapolis, IN 46206-1763.

The Director of Employee Relations is available to assist employees and students in matters where perceived discrimination exists. You may reach the Director of Employee Relations at (317) 921-4762.

Fall 1994

Regional Relations--Central Indiana Region

Editor/Designer/Technical Support: Lisa Kitchen Butt

Accreditation

Ivy Tech State College is an accredited member of the North Central Association of Colleges and Schools.

Professional Accreditations:

American Culinary Federation Educational Institute

American Design and Drafting Association

Commission on Accreditation of Allied Health Education Program (CAAHEP) with selected professional groups including:

American Association of Medical Assistants

American Registry of Radiologic Technologists

Association of Surgical Technologists, Inc.

Joint Review Committee on Respiratory Therapy Education

Association of Collegiate Business Schools and Programs

Council for Standards in Human Services Education

Federal Aviation Administrative Collegiate Training Initiative
Electronics Program

National Academy of Early Childhood Programs for Center Accreditation (in process)

National Association of Industrial Technology

National Automotive Technician Education Foundation, Inc.

National League of Nursing

Approved By:

Chef de Cuisine Association of Indiana, Inc.

Indiana Commission on Vocational and Technical Education

Indiana State Board of Nursing

Indiana State Board of Health
(Qualified Medication Aide, Nurse Aide, Social Service/Long Term Care)

Academic Calendar

Fall 1994

August 15 - 19	Faculty Report
August 22	First Day Of Classes
September 5	Labor Day Holiday
November 22 - 27	Fall Break
November 28	Classes Begin After Break
December 18	Last Day Of Classes
December 19 - Jan. 2	Winter Break

Spring 1995

January 3 - 6	Faculty Report
January 9	First Day Of Classes
March 6 - 12	Spring Break
March 13	Classes Begin After Break
May 7	Last Day Of Classes

Summer 1995

May 9 - 12	Faculty Report
May 11	First Day Of Classes
May 29	Memorial Day Holiday
June 18 - July 2	Summer Break
July 3	Classes Begin After Break
July 4	Holiday
August 12	Last Day Of Classes

Fall 1995

August 14 - 18	Faculty Report
August 21	First Day Of Classes
September 4	Labor Day Holiday
November 21-26	Fall Break
November 27	Classes Begin After Break
December 17	Last Day Of Classes
December 18 - Jan. 1	Winter Break

Spring 1996

January 2-5	Faculty Report
January 8	First Day Of Classes
March 4-10	Spring Break
March 11	Classes Begin After Break
May 5	Last Day Of Classes

Introduction

Moving Forward

In just over a quarter of a century, Indiana Vocational Technical College, popularly known as Ivy Tech State College, has grown from an idea to a thriving post-secondary institution. In 1963, the Indiana General Assembly established Ivy Tech State College as Indiana's first statewide vocational technical college by appropriating \$50,000 for its development. Following appointment of a State Board of Trustees, a president was named and the first training program was established in 1965. Later amendments to the enabling legislation authorized the College's present regional structure of 13 administrative centers to provide accessible technical educational opportunities to all Indiana citizens. Thirteen regional boards of trustees were appointed, and 13 regions were chartered between 1966 and 1969.

Ivy Tech State College is a public, statewide, open-access, community-based, technical college. The College's mission is to enable individuals to develop to their fullest potential and to support the economic development of Indiana. Ivy Tech State College prepares residents of Indiana with the general and technical education needed for successful careers or for continuation in further higher education. The College provides courses, certificate and degree programs, counseling and related services, technical assistance, and community service to individuals, communities, and businesses and industries across the state. Ivy Tech State College promotes educational mobility through partnerships with local schools and other higher education institutions.

Within the statewide College system, some 1,500 full- and part-time faculty members teach in more than 50 program areas offered in four instructional divisions: Business; Visual Communications; Health and Human Services; and Technology.

The College's regional offices of Business and Industry Training work closely with Indiana businesses to offer customized training and retraining in response to specific company needs. These training programs are available on campus or in the workplace.

Regional History

Ivy Tech State College--Central Indiana Region, one of the College's 13 regions, opened its doors in 1966 to serve residents of Indianapolis and Marion, Morgan, Hancock, Johnson, Shelby, Boone, Hendricks, and Hamilton counties. In 1966, the College enrolled 367 students in three technical programs; in Fall 1993, the College enrolled 6,273 students in 33 areas of study. Further, state leaders in government and business are looking to Ivy Tech State College more than ever before to provide the skilled technicians who will support existing industry and attract new industry to the state.

Facilities

The Ivy Tech State College--Central Indiana Region campus is located north of downtown Indianapolis at One West 26th Street, corner of Fall Creek Parkway and North Meridian Street. The central campus is comprised of the North Meridian Center, Technology Center, and the Child Development Center. The East Washington Street Center, 1331 E. Washington Street, houses the Automotive Technology programs.

In addition, the College holds selected classes in area high schools throughout Marion County and the seven surrounding counties. Call (317) 921-4461 for more information.

Admission

Readmission

Limited Admission Enrollment

Transfer Programs

Special Needs

International Students

Admission Non-Degree Seeking

Ivy Tech State College offers courses in many career areas. Admission as a non-degree student is easy. Simply complete a registration form, obtain a counselor's signature, and register. Please check with a counselor to see if the course you want is available to non-degree students. Call 921-4800 for more information.

Admission Degree-Seeking

For admission as a degree-seeking student to one of Ivy Tech State College's programs leading to an Associate Degree or Technical Certificate, the requirement is a high school diploma or GED certificate. The Admissions, Counseling, or Registrar offices can provide a request form. The College must receive an official copy of a high school transcript or Official Report of GED Test results. Anyone applying for Associate in Science degree programs and Health and Human Services programs is required to turn in the high school transcript or GED test results before starting the first semester. All individuals applying for other programs are encouraged to have high school transcripts or GED scores submitted to the Registrar's Office prior to the start of their first semester. These documents must be received prior to the start of the second semester or the student will be placed in a non-degree status. Exceptional circumstances will be considered.

Applicants are required to participate in academic assessment testing. The purpose of testing is to measure the student's achievement in basic skills areas of mathematics, reading, writing, reasoning, and communication.

Assessment testing may be waived in certain programs if the applicant submits either:

- a. An official transcript from an accredited post-secondary institution indicating academic achievement consistent with Ivy Tech State College's admission standards.
- b. Acceptable standardized test scores (i.e., SAT, ACT) indicating academic achievement consistent with Ivy Tech State College's admissions standards.

If assessment indicates that the applicant has the basic skills needed for success in the chosen program, he/she may be allowed to begin program-level coursework. If the assessment reveals skill deficiencies, the applicant will be advised to complete appropriate developmental coursework.

If the assessment indicates that the applicant is unlikely to achieve success at Ivy Tech State College at that time, he /she will be referred to an appropriate community resource offering the needed assistance. The applicant may reapply at a later date if identifiable skills are upgraded.

The College reserves the right to guide the enrollment of students in particular programs or courses on the basis of past academic records, vocational/technical counseling, and testing.

Students seeking admission to Health Occupation programs may be requested to take part in pre-enrollment assessments and/or interviews to fulfill College or external agency requirements. Prerequisites, such as health examinations, may be required before enrolling in programs or courses.

Readmission

Should a student's course of study at Ivy Tech State College be interrupted during a semester, an official drop form must be completed, or an F grade will be assigned. If a student is withdrawing from classes or not re-enrolling for classes, the student may request readmission at a later date. This is accomplished by contacting the Admissions and Counseling offices. Information on eligibility for financial assistance will be available to returning students, from the Financial Assistance Office.

Limited Admission Enrollment

Sometimes the number of students admitted and enrolled in programs and/or courses is limited by College resources or facilities--including available lab equipment or the number of available health program clinical work settings. The Admissions Office should be contacted regarding the status of different programs.

Admission Procedures and Support Documents

For degree-seeking students:

1. A complete student admission data form, which establishes records in the Registrar's Office, is required..

2. Proof of high school graduation or GED completion is normally required for admission into a program leading to a certificate or a degree. The high school graduate or individual who has the GED must request the secondary school or testing center to send an official copy of the transcript or GED certification to the Office of the Registrar. Applicants to Associate of Science degrees and Health and Human Services programs must have their high school transcript or GED certification scores on file in the Registrar's Office before the start of the first semester. Applicants for all other programs must have the high school transcript or GED certification scores submitted no later than the end of the first semester of attendance.
3. Students whose high school transcripts are not in English must have their high school transcripts translated into English and verified by an appropriate outside agency. All international students must have their transcripts evaluated and verified by an appropriate outside agency. Please contact the Admissions Office for an international packet.
4. "Home Schooled" students will be required to obtain a GED for admission, unless the student has an acceptable transcript that was issued by one of the regional accrediting agencies (i.e. North Central, South Central, or Middle States).
5. The College has counselors available to assist students in selecting a course of study at Ivy Tech State College.
6. The College requires that program-declared students either provide acceptable standardized test scores or participate in the College academic diagnostic testing program.
7. Should a student wish to transfer credits to Ivy Tech State College from another college, the student must have an official copy of the grade transcript forwarded from that institution to Ivy Tech State College. This must be done no later than the end of the first semester of enrollment or re-enrollment.
8. The College requires a health examination for certain programs.

Transferring to the College

The College encourages students who have previously attended other recognized colleges and universities to talk to Ivy Tech State College's Admissions Office. Note: Ivy Tech State College does not accept for transfer credit taken at a foreign institution. The College will be glad to assist individuals with the evaluation of their prior educational experiences. Students who have had such education and feel they may be able to test out of certain courses may contact their program chair. It is the responsibility of all students having enrolled in 12 or more attempted quality hours (attempted hours), to have any earned credits from other colleges submitted for evaluation as transfer to the College's Registrar. Courses to be evaluated are to be submitted by midpoint of the first semester or enrollment or re-enrollment. Transfer students will be considered to be making Satisfactory Progress at the time of their transfer to the College. Students are responsible for providing course descriptions and/or copies of the college catalog(s) if further documentation is needed to facilitate the transfer credit review. However, through an Admissions Counselor, students with college work are encouraged to talk with the appropriate program chair to see if testing out of courses is possible, based on previous college or work experience.

The College reserves the right to refuse admission or to accept conditionally those students who have been dismissed for disciplinary reasons from other colleges or universities.

Transferring to Other Colleges

It is the right and responsibility of the receiving institution to decide whether to accept credits from another institution. The Associate in Applied Science degree (A.A.S.) and the technical certificate programs offered by Ivy Tech State College are intended to prepare students with the necessary knowledge and skills to enter or advance in the workplace. However, the College has articulation agreements with many four-year institutions which enable students to transfer some or all of their Ivy Tech credits depending upon the program.

Selected courses from Ivy Tech State College can be used in degree programs at these colleges and universities:

Ball State University
Embry-Riddle University
Ferris State University
Indiana State University
Indiana University-Purdue University at Indianapolis
Indiana Wesleyan College
Martin University
Saint Mary-of-the-Woods College
Southern Illinois University
Tri-State University
University of Indianapolis
University of Southern Indiana

Special Needs

College programs and facilities are designed to be accessible to students with a documented disability. Ivy Tech State College--Central Indiana Region has designated parking and special restroom facilities for the physically challenged. Support Services include tutoring, counseling, adaptive testing, and personal counseling. Special Needs Services works with outside agencies as needed to provide additional resources for students.

Special Needs Services assists students with a disability, including hearing impairments, physical disability, or learning disabilities, and visual impairments. Four full-time staff members are available to work with students whose learning or physical disability may impede their progress in their studies at Ivy Tech. The types of services available include: academic, career, and personal counseling; tutorial sessions with a full-time resource instructor; adaptive testing; sign language interpreters for classes and college-sponsored events; supplementary readers and testing services; coordination of taped textbook services; adaptive equipment including telecommunication device for the deaf (TDD), Visual Tech, braille, "talking" calculator, tape recorders, large print reference books, etc.

Any student with a documented disability is urged to contact the Special Needs Office at (317) 921-4983 for help with special challenges as a student at Ivy Tech State College.

International Students

International students must meet the College admission standards and certain other requirements. Students should request an international packet from the Admissions Office, which has all the details: Ivy Tech State College, Admissions Office, One West 26th Street, P.O. Box 1763, Indianapolis, Indiana 46206-1763. ATT: International Counselor.

Note: International students should apply for admission to Ivy Tech State College at least 90 days prior to the beginning of the term they wish to attend.

An international student must also provide proof of adequate financial support for College fees and living expenses for each year while attending the College. Please refer to the international packet.

Fees, General Expenses, and Financial Assistance

College Fees

Additional Expenses

Payment of Fees

Refund Policy

Financial Assistance Programs

College Fees

The College seeks to provide quality education at the lowest possible cost. General fees are based on the number of credit hours for which the student is registered. Additional costs include Divisional fees and special fees pertaining to particular courses or College activities. Out-of-state students pay an additional fee per credit hour.

All student tuition is to be paid at the time of registration. Students having fees to be paid by a third party must have fee payment authorization before registering. Tuition may be paid by cash, check, money order, Master Card or VISA.

Late registration fees are charged to students who register the first day of class or after. A \$25.00 fee will be charged for all non-sufficient funds and stopped-payment checks.

Additional Expenses

The following additional expenses may apply, depending upon the program of study:

BOOKS: All students are expected to purchase the textbooks for their respective programs. The cost of books will vary according to classes taken.

TOOLS: The College furnishes major equipment items for instruction; however, in many programs or courses students must furnish additional hand tools and equipment.

UNIFORMS AND OTHER SPECIAL EQUIPMENT: Several programs require students to furnish uniforms and special safety equipment.

TRAVEL: Transportation costs to and from the College clinical or practicum sites vary according to the distance and the type of transportation used.

For a current schedule of fees and further information, contact the Admissions Office.

Payment of Fees

All enrolled students must pay all applicable fees. A student is officially registered and allowed to attend classes only when all fees have been paid.

Refund Policy

Students choosing to drop or withdraw from a course or courses must notify the College in writing using the appropriate form. The fee refund for voluntary withdrawal from a class, when applicable, will be processed only after the student files a College drop-and-add form or withdrawal form with the Registrar's Office.

The College will refund students' assessed fees, with the exception of the late registration and deferment fee, on a schedule computed as follows for a regular semester:

To end of first week of semester:	100% refund
To end of second week of semester:	75% refund
To end of third week of semester:	50% refund
To end of fourth week of semester:	25% refund
After fourth week of semester:	No refund.

The effective date for calculating the fee refund is the date of written notification.

Certain other fees may be refundable. Further details are available from the Bursar's Office.

All refunds will be issued by check and mailed to the address shown on the student registration form.

Cancellation of credit courses by the College will result in total refund of fees collected for those courses.

Financial Assistance Programs Pell Grant Program

All Pell Grant recipients must meet student eligibility requirements. Students must apply for the Pell Grant before applying for any other financial assistance. The Pell Grant program makes funds available to eligible students enrolled in a program which leads to a certificate or degree. Pell Grant funds do not have to be repaid.

Supplemental Educational Opportunity Grant Program (SEOG)

SEOG awards do not have to be paid back and provide aid based on the applicant's need, other aid received, and availability of funds. The student must be Pell eligible.

Federal Work Study Program

The Federal Work Study Program provides jobs for students interested in earning part of their educational expenses. Students in eligible programs of study may apply. Limited funds are available. The number of work hours per week is determined by the student's (1) financial need; (2) availability for employment; and (3) class schedule and academic performance. Employment is primarily on campus. Contact the Financial Assistance Office at (317) 921-4777.

Scholarships

Scholarships, funded by private contributions, provide assistance to students in certain programs. The Financial Assistance Office considers all applicants for all available funds. Some scholarships are based on grade point average only. Some are based on both merit and need. Please ask your instructor, program chair, and/or the Financial Assistance Office for information on specific program scholarships.

Loan Program

Educational loans are one choice for Ivy Tech State College students. Before a loan is processed, federal law requires the student to complete an application for the Pell Grant. Students must receive Ivy Tech State College loan counseling before applying for a loan. All other types of assistance will be considered before the Financial Assistance Office will process a loan application.

Veteran's Benefits

Students who served in the Armed Forces may be eligible for Veteran's benefits. Students should contact the Veteran's Affairs Office Counselor for more information at (317) 921-4700.

Questions?

More detailed information is available in the Ivy Tech State College Financial Assistance brochure. Pick up your free copy in the Financial Assistance Office.

All financial assistance recipients must maintain the required Standards of Satisfactory Academic Progress. Students must maintain sufficient progress to assure the completion of their educational objective.

Satisfactory Progress for Financial Assistance

In order to maintain Satisfactory Progress, a student must meet the following standards:

Qualitative Standards of Progress

A student must be in good academic standing by earning at least a 2.00 grade point average (GPA) after attempting 15 or more program hours. Students on Academic Probation must raise their cumulative GPA to 2.00, or must receive a 2.00 term GPA (taking six quality hours* or more), by the end of the probationary term, or financial assistance will be denied.

**quality hours=attempted credits*

Quantitative Standards of Progress

Quantitative Standards of Satisfactory Progress are measured by (A) the number of credits completed each term, and (B) by program completion within the maximum time frame.

Both requirements, as described below, must be met in order to meet Quantitative Standards of progress.

A. By the number of credits completed each term . . .

Completion of credits is defined as earning one of the following grades: A, B, C, or D.

Each term, in order to maintain Satisfactory Progress, a student is required to complete the number of credit hours indicated for his/her enrollment status.

A student who does not earn the minimum credit hours required for his/her enrollment status at the end of his/her first term or at the end of any term immediately following a term of Satisfactory Progress, shall be placed on Academic Probation for the next term. During this probation term, financial assistance eligibility may be continued. However, a student who does not remove his/her probation status by the end of this first probationary term shall be considered as failing to make Satisfactory Progress. Unless he/she successfully appeals this determination, he/she shall be ineligible for financial assistance for the next term of enrollment.

Required Term Enrollment

Enrollment Status: The following designations are used to determine a student’s term enrollment status:

- Full-Time: 12 + semester credit hours
- 3/4 Time: 9-11 semester hours
- 1/2-Time: 6-8 semester hours
- Less than 1/2 Time: 1-5 semester hours

Required Term Enrollment Status For Financial Assistance: Each term, the aid recipient must complete at least the minimum number of credit hours depending on his/her enrollment status for that term. This includes Basic Skills Advancement courses.

<u>Enrollment Status</u>	<u>Minimum Required Number of Completed Credits per Term</u>
Full-Time:	9
3/4 Time:	6
1/2 Time:	4
Less than 1/2 Time:	All Hours Attempted

B. By program completion within the maximum time frame allowed . . .

A student is expected to complete all requirements for an Associate Degree or Technical Certificate within the maximum allowable time frame. Student maximum time is reached after he/she has attempted (enrolled) 50% of the number of credits that the Technical Certificate or Associate Degree program requires.

If a student reaches the maximum number of credit hours attempted, and the student has not completed his/her declared course of study, suspension of financial assistance will occur regardless of changes from one course of study to another. Reinstatement of aid would take place only if the student completed a course of study and subsequently enrolled in a course of study leading to another degree or certificate. In cases where a student is attempting to complete a subsequent course of study, all hours previously earned which apply toward that subsequent course of study will be counted toward the maximum time frame for that degree or certificate.

Financial Assistance for Basic Skills Advancement Courses

Financial assistance may be granted for up to 30 credit hours of enrollment in Basic Skills Advancement courses. Educationally-disadvantaged students accepted in an eligible program will be able to enroll in Basic Skills Advancement courses (not counted toward the TC, AS, or AAS degree) in order to ensure their future academic good standing.

Financial Assistance will be Denied:

1. In those terms following completion of the total maximum time frames. Total maximum time frames include all terms of enrollment during which students are not making satisfactory progress and/or are not receiving financial assistance.
2. In any term(s) within the maximum time frame following the first probation term in which satisfactory progress was not achieved.

Regaining Eligibility for Financial Assistance Standards of Progress

Students who are denied financial assistance as a result of failure to maintain satisfactory progress will regain their eligibility if any of the following conditions are met:

1. Enroll at least half-time at their own expense and receive at least a 2.00 term GPA while meeting the Quantitative Standards of Progress. The student will regain financial assistance eligibility and will be on probationary status the following term.
2. Enroll at their own expense and raise their cumulative GPA to a 2.00 or higher while meeting the Quantitative Standards of Progress. The student will regain financial assistance eligibility and will be in good standing the following term.
3. Students who have been terminated from financial assistance, who are within their maximum time frame, and return to Ivy Tech State College after an absence of 12 or more consecutive months will be on Probationary Status during their first term of re-enrollment but may receive financial assistance.
4. Students who have been suspended from financial assistance more than once, who are within maximum time frame, and return to Ivy Tech State College after an absence of 60 or more consecutive months will be on Probationary Status during their first term of re-enrollment but may receive financial assistance.

Note: Maximum Time Frame suspension cannot be reversed through the appeals process.

Academic Appeal

Guidelines, procedures, and forms for an appeal because of academic problems are available through the Dean of Instructional Affairs Office.

Financial Appeal

After discussion of the situation with the Financial Assistance Manager, students will be directed to file a financial appeal with the Financial Assistance Appeals Committee.

Student Life

Testing Out of Courses

Registering for Courses

Open/Late Registration

Dropping and Adding Classes

Student Withdrawal from Classes

Student Academic Support Services

Career Counseling

Office of Employment and Career Services

Learning Resource Center/Library

College Bookstore

Child Development Center/Child Care

Emergency College Closing

Student Organizations

Student Senate

Alumni Association

Housing

Lost and Found

Student Right-To-Know Policies

Campus Crime and Security

Communicable Disease Policy

Drug Policy

Student Rights and Responsibilities

Testing Out of Courses

Policies regarding testing out of courses vary from program to program. A student who wishes to test out of a course should contact the program advisor. A \$10.00-per-credit-hour fee will be charged for the test. The general guidelines for test-out are as follows:

1. Test-out examinations should be taken before the student registers for the course for which the test out is attempted.
2. Test-out examinations are normally completed at one sitting (unless the test is offered in two parts, i.e., lab and written exams).
3. Test-out credits are not included in credit computations for financial aid programs or student grade point averages.

Registering for Courses

The registration process includes financial aid and program counseling, selection of courses, and payment of fees. Newly-admitted students will be notified of when to register for their first semester classes.

Specified days are set aside for registration before the beginning of each semester. Students should seek assistance in course selection from faculty advisors or counselors through the Counseling Office before registering for classes.

The Counseling Office can supply information concerning registration.

NOTE: STUDENTS ARE REGISTERED ONLY WHEN FEES HAVE BEEN PAID.

Open/Late Registration

Please see class schedule for course reservation days and registration times. Registration on or after the first day of classes each term is considered late. Students may register after the first week of classes with the permission of the instructor; however, a late registration fee is assessed beginning the first day of classes. In no case will students be allowed to register following the first class after the first week of classes. For further information, students are asked to contact the Admissions and Counseling offices.

Dropping and Adding

Courses may be dropped or added during the first two weeks of the regular semester. Students may be eligible for a full or partial refund of the assessed fees for courses dropped during the first four weeks of the semester. Students changing, adding or withdrawing from a class must notify the College in writing using the drop-and-add form. This form must be presented to the Registrar's Office.

Student Withdrawal

From the beginning of the second week to the end of the week marking the completion of 75 percent of the course, a student may withdraw from a course by filing a completed withdrawal form at the Registrar's Office and discontinuing class attendance. Students may be eligible for a full or partial refund of the assessed fees—see Refund Policy. Records will then indicate status of "W" in place of a grade for that course. A student who discontinues class attendance after the last day to withdraw with a "W" will receive a grade commensurate with the course requirements.

Student Academic Support Services

The Student Academic Support Services (SASS) at Ivy Tech State College--Central Indiana Region offers a variety of services to Ivy Tech students. SASS combines humans with technology to help students. Following is a brief description of services and operation hours during the Fall and Spring Semesters. Summer hours may vary. Students with academic needs are encouraged to call (317) 921-4319 or (317) 921-4972.

Computer Assisted Instruction Lab (CAI)

The CAI Lab offers a variety of services to Ivy Tech students through computer use. Students may visit the lab and utilize the following educational software: ESL, math, developmental science, reading, study skills, and writing.

The CAI Lab hours are 8:00 a.m. to 8:30 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 12 noon. The Center is located in Rooms 252A, 252B, 248, North Meridian Center.

Testing Lab

Students who miss tests or need to retake tests may, with approval from the instructor, visit the Testing Lab.

The Testing Lab hours are 9:00 a.m. to 7:30 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 12 noon. The Center is located in Room 255A, North Meridian Center.

Tutoring Lab

Students have the opportunity to work with professional tutors in math, reading, chemistry, and anatomy and physiology.

The Tutoring Lab hours are 8:00 a.m. to 8:30 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 12 noon. The Center is located in Room 258, North Meridian Center.

Writing Center

Students have the opportunity for one-on-one tutoring. The Writing Center helps students generate ideas for papers, helps students with their designated deficiencies and provides feedback and suggestions.

The Writing Center hours are 8:00 a.m. to 12 noon and 1:00 p.m. to 5:00 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 12 noon. The Center is located in Room 258A, North Meridian Center.

Career Counseling

The Offices of Admissions, Counseling, and Employment and Career Services offer career counseling to all interested students. Students may obtain individual counseling and/or assessment to assist them in identifying their abilities or occupational interests. Counseling and assessment is also helpful in developing realistic education and career plans through use of occupational outlook data.

In addition to the services offered by the Counseling Office, the College utilizes a faculty advisor system. On admission, each degree student is assigned a faculty advisor whose purpose is to:

2. Guide the student in meeting the requirements for graduation as prescribed by the College;
3. Ensure that appropriate technical and general education electives are included in the chosen course of study.

**Office of Employment and
Career Services**

The Office of Employment and Career Services assists registered graduates and enrolled students of the College in career development, student employment, and resume assistance. The Employment and Career Services staff and program advisors coordinate efforts to refer qualified candidates to appropriate employment opportunities.

The Employment and Career Services philosophy is “helping students/graduates to maximize the employment process and assisting them in making a smooth transition into the world of work.”

The Office of Employment and Career Services offers a full range of services which includes but is not limited to the following:

1. Individual employment counseling and career assistance;
2. On-campus recruitment with employers from business and industry;
3. Job Search/Interviewing and Resume Writing Workshops;
4. Classroom presentation;
5. Annual Job Fair;
6. Resume referral: Over 5,000 jobs are listed annually;
7. Credential files and references: Maintained on all registered graduates and undergraduates for job matching and resume referral purposes;
8. Various computerized services offered in the Office of Employment and Career Services: Resumes by Ralph, State Employment Services (JSMS), KiNexus (candidate registration process), Choices and Passport To Your Future (career exploration software packages);

1. Assist the student in course selection and program planning;



9. **Resource Center:** Includes career information, company literature, annual reports, job vacancy notices, application forms, information on four-year colleges, and free job search booklets and handouts.

Students are encouraged to register early in their college careers and take full advantage of opportunities available to them from the Office of Employment and Career Services.

**Learning Resource
Center/Library**

The Learning Resource Center's hours are 8:00 a.m. to 9:00 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 4:30 p.m. Summer hours may vary. The Center is located on the fourth floor of the North Meridian Center.

The Ivy Tech State College Learning Resource Center (LRC) houses Library Services, Audio Visual Services, and Distance Learning Services. The Library has a collection of print and non-print materials suited to the objectives and programs of the College. Library resources include: the general book collection, reference books, periodicals, pamphlets, audiovisual materials, CD-ROM journal indexes and full-text databases. The Library offers access to other library collections through interlibrary loan networks.

The Library's book collection has over 13,000 books arranged by the Library of Congress classification system. The Library subscribes to more than 400 periodicals.

Books may be checked out for two weeks and renewed for later weeks if they are not needed by others. To check out books and other materials from the Library, students must use an Ivy Tech library card which is issued after verification of registration. The Library sends notices of overdue books and fines. The fine is five cents per day after the due date (Saturdays, Sundays and Holidays are excluded).

The Library's Multimedia Center contains all of the Library's software, listening stations, and viewing stations.

Software and equipment may be scheduled for class presentations by students.

College Bookstore

The College Bookstore's hours are 8:00 a.m. to 5:30 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 4:30 p.m. The Bookstore is located on the fourth floor of the North Meridian Center.

Cash, personal checks with proper ID, Visa, and MasterCard are accepted for payment.

Refunds on books are limited. To receive a full refund for textbooks, the following conditions must be met:

1. All textbooks must be returned in new, unmarked mint condition with the cash register receipt.
2. All textbooks must be returned within 3 weeks of the date the textbooks were purchased.

A 75% refund will be given for textbooks purchased new that are not in new, resalable condition. This includes any markings, stains, or writing in the book (including your name), or any visible binding or cover damage. No refunds are allowed on any supplies/clothing.

Child Development Center

Ivy Tech State College--Central Indiana Region has an on-campus Child Development Center to meet the child care needs of adult students, College staff and faculty, and locally-employed parents and guardians. This licensed center also provides on-site training opportunities for practicum students in the Child Development and other Health and Human Services programs. This model facility is licensed to serve 60 children, ages 2 to 12, from 6:30 a.m. to 10:00 p.m., Monday through Thursday and until 6:00 p.m. on Friday. Note: Hours could vary, depending upon enrollment. The Center is open to visitors interested in either the Child Development Program or the Child Development Center services except during naptime, which is 12:30 to 2:30 p.m. daily. Visitors must register with the center manager upon arrival.

Emergency College Closing

In the case of an emergency closing, local radio stations will be contacted to announce the closing. WIBC at 1070 on the AM dial is the official closing station.

Student Parking

Students must register their motor vehicles. A special permit is required to park in the handicapped zone. Stickers are to be displayed in the vehicle while it is parked on campus, and students are expected to park only in designated student parking areas. Vehicles improperly parked in areas reserved for the handicapped, visitors, or others may be towed away at the owner's expense.

Student Insurance

For students registered in credit courses at Ivy Tech State College, the College provides insurance in a designated amount for injuries sustained while participating in College-sponsored activities. The activity must take place on College premises or on any premises designated by the College. Students also are covered while traveling to and from college-sponsored activities as a member of a group under College supervision in a College vehicle.

It is the student's responsibility to report injuries promptly to the instructor or to Security. The insurance is for a specified minimum amount of coverage. It is not intended to replace insurance coverage students may already have. It is suggested that students review their own coverage.

Student Senate

Students in each region are encouraged to participate in student government through membership in the Student Senate. The Student Senate is the representative governing body of the students and is regulated by the College's rules, policies, and regulations. The Student Senate is composed of representatives and officers that oversee all clubs and organizations. Student Senate representatives are elected or selected according to the by-laws of each regional Student Senate constitution and serve as stated in those by-laws.

The student body membership may consist of representatives of the first-year class, the second-year class, each program area, and an advisor as established in the by-laws.

The Student Senate was established by students to encourage participation in student government and to promote College spirit and recognition. The Student Senate exercises the authority, unless otherwise delegated, to legislate on student matters, subject to the approval of appropriate College administrative offices.

The constitutions of all student organizations must be approved by a quorum of the Student Senate, consisting of a simple majority of the total membership and one staff advisor, or as otherwise stated in the by-laws. The functions of the Student Senate include:

1. Communication of bona fide concerns of the student body and suggestions for improvement to appropriate College officials.
2. Approval of those student organizations deemed beneficial to student life and worthy of being a part of the College.
3. Assurance that copies of the constitution, by-laws, and statement of purpose and objectives of each recognized student organization are on file in the Counseling Office.
4. Referral of student grievances concerning disciplinary matters or student status to appropriate College officials.
5. Planning and conducting of all appropriate extracurricular student activities.
6. Submission of student activity budgets for review and approval by the regional administration.

Student Organizations

Current clubs and organizations include:

Administrative Office Assistants

Alumni Association

Amateur Radio Club

Hospitality-Restaurant Management Student
Development Committee

Human Services Club

Phi Theta Kappa (PTK)

Multi-Cultural Society

National Issues Forum

Student Paralegal Association

Student Senate

These clubs and organizations provide opportunities for leadership training and community service, promote an intellectual climate for an interchange of ideas and ideals, and foster the desire for continued education. Certain criteria may apply to some clubs. Phi Theta Kappa, for example, requires applicants for initiation to have completed at least 12 semester hours with at least a 3.5 GPA.

Alumni Association

Membership in the Ivy Tech State College Alumni Association is open to current students. Others eligible for membership include students who have earned a certificate or degree, former students at any of the local sites, current faculty and staff, former faculty and staff members, and trustees.

For information on Alumni Association activities, call (317) 921-4312.

College Professional and Trade Societies

Student chapters of various professional and trade societies will be formed in the same manner as other student organizations and are subject to the same requirements.

Housing Information

Numerous listings are available daily under "Apartments for Rent" in the classified pages of The Indianapolis Star and News or your local paper.

Ivy Tech State College does not offer housing.

Lost and Found

Most items lost or found on the Ivy Tech State College campus are turned in at the Security Office where an information file is maintained to help students locate lost items. Lost and Found items are held in storage for 30 days. After 30 days, items are discarded.

Student Right-To-Know

Ivy Tech State College--Central Indiana Region follows the Student Right-to-Know and Campus Security Act, Public Law 101-542, as amended by the Higher Education Technical Amendments of 1991, Public Law 102-26. Required information is available to prospective and current students through the Admissions Office.

Campus Crime Awareness and Campus Security Information

The mission of the Campus Security Department is to provide the safest educational environment possible for all faculty, staff, students, and visitors to all Ivy Tech State College campus locations.

Any student, prospective student, faculty, or staff person who has been a victim of, or witness of, a criminal act which occurred on any of the facilities or grounds of any Ivy Tech campus is encouraged to immediately report this act to Campus Security. Campus Security operational hours are posted on campus.

Each Ivy Tech campus employs adequate security staff to whom all criminal activity should be reported. It is College policy to assist the police in any investigation which they conduct.

Known and suspected violations of Federal and Indiana laws and other emergencies should be reported to the Campus Security by calling (317) 921-4806.

Access to Ivy Tech State College facilities is from 7:00 a.m.-11:00 p.m. during each school semester weekday and 7:00 a.m to 5:00 p.m. on weekends.

Faculty, staff and students must work together to take steps to protect themselves from becoming victims of a crime.

The Crime Awareness and Campus Security Act of 1990 requires that the following campus statistics be provided for your information.

Offenses Reported for 1992, 1993 and 1994*:

*Reflects January through July 1994

Incidents: -----	1992	--1993	--1994
Murder -----	0	-----0	-----0
Rape -----	0	-----0	-----0
Robbery -----	1	-----0	-----1
Aggravated Assault/Battery -----	0	-----0	-----0
Burglary -----	18	-----36	-----13
Motor Vehicle Theft -----	1	-----1	-----1
Arrests:			
Liquor Law Violations -----	0	-----0	-----0
Drug Abuse Violations -----	0	-----0	-----0
Weapons Possessions -----	0	-----0	-----0

Students participating in off-campus, college sponsored, activities need to report criminal incidents to the law enforcement agency having jurisdiction, and inform the Campus Security.

Communicable Disease Policy

The Communicable Disease Policy of Ivy Tech State College was developed to ensure the good health and safety of all students and employees.

Communicable disease shall be defined as any condition which is transmitted directly or indirectly to a person from an infected person or animal through the agency of an intermediate animal, host or vector, or through the inanimate environment.

Communicable and infectious disease shall include, but is not limited to:

- Influenza
- Tuberculosis
- Conjunctivitis
- Infectious Mononucleosis
- Acquired Immune Deficiency Syndrome (AIDS) and AIDS Related Complex (ARC)

- Positive HIV antibody status
- Hepatitis A, B, and D
- Meningitis
- Sexually Transmitted Diseases

No student or employee who has a communicable disease will be required to report the condition to any campus official. However, students and employees should be encouraged to advise local health authorities if they have a communicable disease. Local health authorities should offer counseling to these persons about measures which can be taken to prevent the spread of infection and about ways to protect their own health.

Persons who know or who have reason to believe that they are infected with a communicable disease have an ethical and legal obligation to conduct themselves in accordance with such knowledge in order to protect themselves and others. Students and employees who have communicable diseases, whether symptomatic or not, will be allowed regular classroom and work attendance in an unrestrictive manner as long as they are physically able to attend classes, college activities and/or work, and do not pose a medically-proven threat for transmission of the disease or condition. When there is no medical justification for totally restricting the access of students and employees who have communicable diseases, they will be allowed access to the College Campus.

No person, group, agency, insurer, employer, or institution should be provided any medical information without the prior specific written consent of a student or employee unless required by state and/or federal law. Furthermore, all medical information relating to the communicable diseases of students and employees will be kept confidential, according to an amendment to the Family Education Rights and Privacy Act of 1974.

For more information regarding this policy, please contact the Student Affairs Office.

Drug Policy

Definitions

Substances referred to under this policy include all illegal drugs, alcoholic beverages and misused legal drugs (both prescription and over-the-counter).

2. Treatment programs available in Indiana.
3. The possible legal consequences of drug and alcohol use.

The purpose of the Drug-Free College Policy is to maintain a safe and productive teaching and learning environment and to be in compliance with the Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act.

All employees are expected to perform their duties and students are expected to attend classes, labs, and College activities unhindered by the substances defined above. The College will establish a drug-free awareness program for employees and students, and employees and students are expected to work together to maintain a teaching and learning environment free of illegal drugs.

The unlawful manufacture, distribution, dispensation, possession, and use of illegal drugs present a hazard to students, employees, and property and are not permitted at any property in use by the College, at any official function sponsored by the College, and at any course conducted by the College. Any employee or student convicted of a criminal drug offense in or on properties controlled by the College, or while conducting College business is required to notify his/her supervisor or the Director of Student Affairs, respectively, within five days of the conviction.

Any employee who violates this policy is subject to disciplinary action. These actions may include, but are not limited to, reprimand, participation in a treatment program, suspension, and/or termination. Each supervisor is responsible for implementing the Drug-Free College Policy as it relates to employees.

Any student who violates this policy is subject to disciplinary action. Such action may include, but is not limited to, dismissal from College classes, programs, and activities. The Director of Student Affairs is responsible for implementing the Drug-Free College Policy as it relates to students. As part of an effort to create a drug-free campus, Ivy Tech State College believes that employees and students should be educated about:

1. The physical and emotional health risks associated with the misuse of alcohol and drugs.

The College encourages employees and students who experience problems with drugs and/or alcohol to seek help before these problems interfere with their performance at Ivy Tech State College and endanger their health and safety.

Student Rights and Responsibilities

Student Conduct

The reputation of Ivy Tech State College and the community depends, in large part, upon the behavior of its students. Students enrolled at the College are expected to conduct themselves in a mature, dignified, and honorable manner.

Students are subject to College jurisdiction while enrolled at Ivy Tech State College. The College reserves the right to take disciplinary action against any student whose conduct, in the opinion of Ivy Tech State College representatives, has not been in the best interests of the student, other students, or the College.

All Ivy Tech State College students are expected to abide by the following College rules of conduct.

“Student” as used refers to a student, a group of students, a prospective student, or a group of prospective students.

Ivy Tech State College--Central Indiana Region complies with regulations governing Drug-Free Schools and Campuses (34 CFR Part 86). Information about community drug and alcohol abuse programs is available in the Counseling Office located on the first floor of the North Meridian Center.

College Rules

1. **Alcoholic Beverages:** In compliance with Indiana State Law, consuming, being under the influence of, or possessing intoxicating beverages on College property is not permitted.

2. **Illegal Use of Drugs:** In compliance with Indiana State Law, being under the influence of, use of, possession of, or distributing illegal drugs is not permitted.
3. **Smoking:** In compliance with Indiana State Law, Ivy Tech State College buildings are classified as "nonsmoking" facilities.
4. **Assembly:** College policy states that assembly in a manner that obstructs the free movement of others about the campus, inhibits the free and normal use of the College buildings and facilities, or prevents or obstructs the normal operation of the College is not permitted.
5. **Signs:** Students may erect signs on campus or display signs or posters on designated bulletin boards after receiving written approval from the appropriate College official.
6. **Solicitation of Funds:** College policy requires that individuals or organizations seeking the use of campus facilities or scheduling activities to solicit funds, must first obtain written approval from the Director of Development.
7. **Arms/Deadly Weapons:** In compliance with Indiana State Law, possession of firearms (except those possessed by police or security officers) and other weapons is prohibited on College property or at any College sponsored activity held elsewhere.
8. **Cheating:** Cheating on papers or tests is a violation of College rules.
9. **Counterfeiting and Altering:** College policy states that copying or altering in any manner any record, document, or identification form used or maintained by the College is not permitted.
10. **Theft of Property:** Theft of personal or College property is a violation of College rules.
11. **Vandalism:** The destruction or mutilation of Ivy Tech State College books, magazines, equipment or buildings is a violation of College rules.
12. **Use of College Facility:** Students are permitted on campus during normal hours published by Ivy Tech State College and at other times established in the College calendar. Students wishing to utilize College facilities at other times must request permission from the appropriate College official.
13. **Financial Responsibility:** Students are expected to pay all fees, fines, or loans in a timely manner. Grades, records, degrees, etc., will not be awarded until debts to the College are paid. Students will not be allowed to register in an "owe fees" status.
14. **Motor Vehicles:** Students are expected to comply with parking regulations. Handicapped parking spaces and visitors' areas are reserved for those purposes, and vehicles improperly parked in those areas may be ticketed or towed at the owner's expense.
15. **Harassment and Intimidation:** This is defined as conduct causing alarm, or creating a risk by threatening to commit crimes against persons or their property or making unwelcome sexual advances or requests for sexual favors. This also covers harassment or intimidation of persons involved in a disciplinary hearing and of persons in authority who are in the process of discharging their responsibilities.
16. **Disruptive Behavior:** Behaviors or actions that disrupt the College's processes (academic and/or non-academic) are in violation.
17. **Assault/Battery/Physical and/or Verbal Abuse:** Altercations are prohibited under College rules. Perpetrators are also subject to Indiana State Law.
18. **Discrimination Activities:** Any student involved in discrimination activities towards students or staff will face disciplinary action.
19. **Gambling:** In compliance with Indiana State Law, gambling as prescribed by the law is not allowed.
20. **Hazing:** Hazing is a violation of College policy.
21. **Use of indecent or abuse language:** Use of indecent or abusive language is a violation of College rules.

22. **Unauthorized use of college name:**
Unauthorized use of the College name is a violation of College rules.
23. **Lewd or indecent conduct:** Indecent conduct is a violation of College rules.
24. **Violation of local ordinances or of state or federal laws.**
25. **Furnishing of false information with intent to deceive:** Providing false information is a violation of College rules.
26. **Repeated offenses of a less serious nature.**

Violations

The College maintains jurisdiction over matters such as, but not limited to, alcoholic beverages, illegal use of drugs, motor vehicles, assembly, soliciting, use of College facilities, the posting or erection of signs, theft, arms/deadly weapons, vandalism, physical or verbal altercations or abuses, and/or discrimination activities.

The College attempts to protect students from those who might violate laws and ordinances. Local, state, or federal law enforcement officials will be notified of anyone who violates local, state, or federal laws. Violators shall be subject to prosecution by the appropriate law enforcement officials.

Anyone found in violation of College regulations shall be subject to disciplinary action by the College through due process procedures for student conduct violations. The regulations and due process procedures are available for reading and review in the College Learning Resource Center. Copies are available through the Admissions Office.

Due Process Procedures for Student Conduct Violations

Due process provides the College an appropriate mechanism to deal with violation of student conduct and conversely allows a student with a disagreement to grieve against a College personnel's decision affecting that student. The intent of due process is to provide a process or procedure for unbiased review of a particular case or situation. The intent, rather than the mechanism, is the focus of this process. Thus, exceptions to the specifics and mechanisms can and will be made.

1. Cases or appeals of student misconduct and/or lack of academic integrity are to be referred to the appropriate designee of the Vice President/Chancellor, Dean of Instructional Affairs, or Director of Student Affairs. This College representative:
 - a. will be responsible to review all initial disciplinary procedures;
 - b. may suspend a student for a period of time until the Student Status Committee can meet;
 - c. may withdraw the student from a course or program or dismiss the student from the College for disciplinary reasons.
2. Students recommended for suspension, withdrawal, or dismissal will be notified in writing. Students will be given an opportunity to appeal the decision to the Student Status Committee if they so choose.
3. The Student Status Committee deals with all cases relating to disciplinary actions or the academic status of students. Each region has a Student Status Committee that makes recommendations to the Vice President/Chancellor.

4. The Student Status Committee will be composed of at least six members, including two full-time instructional staff members and two administrative staff persons appointed by the Vice President/Chancellor of the region. The additional two members will be students designated by the Student Senate. The Committee's review and subsequent disposition of a formal complaint will begin no later than 30 days after receipt of the written complaint. Staff legal counsel, as needed, will be available to the Committee.
5. The Student Status Committee will assure the student due process. A written statement will first be presented by the student to the chairman of the Student Status Committee. The student will be invited to speak on his or her behalf to the Committee. The name of anyone the student wishes to bring to the meeting must be submitted for approval, in writing, to the Student Status Committee Chair prior to the meeting. Only the student may address the committee, unless otherwise allowed.
6. The Student Status Committee will issue a recommendation to the Vice President/Chancellor following its deliberation. Disciplinary probation or dismissal from the college will be final only after review by the Vice President/Chancellor, who may approve or disapprove the recommendation of the Student Status Committee. Students dismissed for disciplinary reasons will not be entitled to refunds.
7. The student will be informed in writing of the decision of the Student Status Committee and of the subsequent recommendations to the Vice President/Chancellor, whose decision is final. All of the written recommendations from the committee will be filed in the student's folder in the Registrar's Office.
8. If the student disagrees with the Student Status Committee recommendation, he or she may file a complaint with the regional Vice President/Chancellor within 72 hours after notification of the Student Status Committee's decision.
9. Exceptions to these rules may be made in extenuating circumstances at the discretion of the Vice President/Chancellor or his designee, upon request by those involved.

Disciplinary Action

A student who violates the rules and regulations of the College may be subject to any of the following disciplinary actions:

1. Verbal reprimand.
2. Restitution for damages.
3. Restriction of privileges.
4. Withdrawal from a course, program, or the College.
5. Suspension from the College.
6. Dismissal from the College.

Student Grievances

Students may bring legitimate grievances to the attention of their instructors, counselors or other advisors. Time will be provided for a grievance conference within two weeks of the complaint. The purpose of the conference is to discuss the problem and to find, if possible, a mutually satisfactory resolution. The conferences will be held within two weeks of notice of the complaint.

The first part of the process involves the student working one-to-one with appropriate staff to resolve the situation. If the grievance concerns an instructor or faculty advisor, the student, through a stepladder process, should first request a conference with a program chair or area supervisor. If the situation is not resolved, the student should address the department chair. The next step, if there is not resolution, is to meet with the divisional chair. Finally through this part of the process, the student can petition the Dean of Instructional Affairs.

Note: If the student has a discrimination complaint, it will be referred to the Affirmative Action Officer to be initially processed under the College Affirmative Action Plan. If a hearing is necessary, the Affirmative Action Officer may return the matter, with advice, to the Student Status Committee, for a formal hearing.

1. Bring your complaint to the attention of your instructor, advisor, or counselor.
2. Your advisor, instructor, or counselor will provide you a conference within two weeks of the notice of your complaint.
3. If you feel that such a conference with your instructor, advisor, or counselor would be futile because of the advisor's involvement in the grievance, you may elect to request a conference with a department head, division chair or manager as deemed appropriate. This conference will also be held within two weeks of the notice of your complaint.
4. If the complaint is not resolved to your satisfaction through the informal procedure, you may submit the grievance in writing to the Dean of Instructional Affairs or Director of Student Affairs. Exception: if the complaint is filed against a Director or Dean, his/her responsibility in these procedures shall be assumed by another Director/Dean.

2. If the Committee believes a policy or procedure of the College is being legitimately challenged, it will refer the grievance to the Vice President/Chancellor with an explanation of its concern.

- D. **Remand complaint:** If it appears no legitimate informal attempt to resolve the matter has taken place and it appears such discussion might lead to resolution of the complaint, then referral of the matter to the student advisor or other appropriate staff person for review and discussion with the student would be in order. If resolved, a report to the Student Status Committee will be made by such staff person. The Student Status Committee will review the agreement reached with the student to assure that, in fact, there was mutual agreement and understanding.
- E. **Hold formal hearing:** If a grievance cannot be resolved utilizing the steps listed above, the committee may hold a formal hearing. If held, witnesses may be called, including the parties to the complaint. Legal counsel may be present, but not talk on behalf of the student. A recommendation will then be formulated and a report made to the Vice President/Chancellor of the suggested resolution of the matter.

Academic Information

Associate in Science (AS) Degree

Associate in Applied Science (AAS) Degree

Technical Certificate

Career Development Certificate

Business and Industry Training

Weekend College

Off-Campus Instructional Sites

Basic Skills Advancement Programs

Divisional Degree Offerings

Ivy Tech State College programs are designed to meet the needs of the student population, accommodating those who wish to enroll in a few classes as well as those who prefer a full program. Credit programs normally culminate in the Associate in Science degree, the Associate in Applied Science degree or the Technical Certificate. Ivy Tech State College--Central Indiana Region's three divisions are Business, Health and Human Services, and Technology.

Short-term training is available in selected credit courses, in sequences of credit courses, and in custom-designed courses for local businesses and industries. Also available are contract training programs, and non-credit institutional activities, such as seminars, workshops, and conferences.

In addition to program and custom-designed courses, Ivy Tech State College offers basic skills instruction for students who require academic support and/or study skills to assist them in successful completion of a regular program of study. Additionally, enrollment in certain basic skills courses is designed to prepare the student for the GED examination.

Associate in Applied Science (AAS) Degree and Associate in Science (AS) Degree Programs

Associate in Applied Science degree programs prepare students for career mobility within occupational clusters at the technician or technology level. The programs offer education in recognized specialties with emphasis on analysis, synthesis, and evaluation. The program content, which is approximately 75 percent technical and 25 percent general education, provides both depth and breadth in conceptual and manipulative skills. The general education courses, offered in the areas of communications, humanities, mathematics, life and physical sciences, and social sciences, equip students with the life skills they need to be fully functioning, contributing members of society. Some, but not all, AAS degree programs may transfer to four-year institutions. Ask for details in the Admissions Office.

Associate in Science degree programs prepare students for careers and also enable students who have an interest and ability to transfer Ivy Tech State College credits to cooperating four-year institutions. These programs emphasize cognitive skills intended as pre-baccalaureate study and provide courses equivalent to those prescribed in the lower division of the receiving four-year college or university.

Technical Certificate (TC) Programs

The Technical Certificate programs provide training in conceptual and manipulative skills for specific occupations. Each program contains a sequence of required courses in a recognized specialty within one of the technologies taught at the College. The program content is designed to develop competency in the comprehension of general and technical skills in that specialty.

Career Development Certificates (CDC)

Ivy Tech State College provides short-term programs for individuals who desire to develop competencies in a specific area. These programs are less than 32 semester credits in length. Instruction is delivered through methods that include regular courses and specifically-designed courses. Many of these courses are based on a sequence of learning experiences determined by a certifying state or national association or organization. Completion of certain short-term programs qualifies students to sit for certification examinations. The number and types of short-term programs vary. For more information contact the Office of Extended Services at (317) 921-4460.

Business and Industry Training Programs

Ivy Tech State College offers specialized training services for business and industry. The Office of Business and Industry Training develops custom-designed programs and services to meet the training needs of local businesses. The Office of Business and Industry Training works with business and industry, trade unions, and public and community economic development groups to assess training needs and to deliver training when and where it is needed, often in-plant. Call (317) 921-4775 for more information.

General Technical Studies Program

The General Technical Studies Program provides an option for students who may not be ready to enter a degree program. As such, the program serves primarily as a beginning point for students as they define and meet their educational objectives. It is designed to meet the diverse needs of the students Ivy Tech serves. The program will:

- Provide an opportunity for students to correct skill deficiencies before enrolling in a technical degree program.
- Provide a program for students who have not selected a specific educational or career goal by the time they have entered the college.
- Allow students who are waiting for admission into a selective program to enter the college.
- Provide a directed program of career-oriented educational exploration to encourage an examination of occupational program areas.
- Increase student retention by providing a vehicle which promotes informed choices.
- Provide undecided students the opportunity to pursue coursework which will serve as a foundation for related one- or two-year programs while engaged in career exploration.
- Provide an opportunity for a student to pursue a one-year program of general technical studies.

The General Technical Studies Program is available at each of Ivy Tech's 22 campuses. Interested students should contact their local campus.

Tech Prep

Ivy Tech developed a statewide Tech Prep associate degree program in 1993. The purpose of Ivy Tech's Tech Prep program model is to enable Indiana high school students to enter into and complete a post-secondary technical program to learn the skills necessary to succeed in the workforce. This purpose is achieved through three program objectives:

- Provide high school students with the information they need to prepare for college-level technical education, so students can enter directly into a technical program after high school graduation and avoid the need for costly and time-consuming remedial coursework;
- Provide high school students with opportunities for achieving advanced standing, so students who take advantage of this opportunity can complete a technical associate degree program in less than two years of full-time study; and
- Provide opportunities for students to complete an enriched course of study, so qualified students can pursue an advanced technology curriculum.

Weekend College

Weekend College is Ivy Tech State College's way of providing an educational opportunity to individuals who are unable to attend during regular weekday or evening hours. Students can earn a degree on the weekend. The two degrees currently offered on the weekend are Computer Information Systems and Business Administration with either a Management Specialty or a Human Resources Specialty.

Individuals interested in Weekend College include:

1. Individuals whose work and home schedules create a need to attend classes on Friday evenings, Saturdays, or Sunday afternoon.
2. Individuals anticipating a career change.
3. Current students who want to accelerate their academic progress.
4. Individuals interested in enhancing their skills and staying abreast of advancing technology in their fields.

Weekend College offers a wide selection of credit courses and continuing education programs to a diverse group of people. To receive more information about Weekend College call (317) 921-4663 or 1-800-545-2181 if calling from outside Indianapolis.

Off-Campus Classes

Ivy Tech State College provides credit courses at a number of off-campus branch locations. Currently, more than 75 regular credit courses are being offered. These locations are Ben Davis, Lebanon, Noblesville, Greenfield, Walker Career Center (Warren Central), Shelbyville, Greenwood, Martinsville, Mooresville, and Pike High School.

Serving Johnson County and Indianapolis Southside

Greenwood High School
615 West Smith Valley Road
Greenwood, IN 46142
921-4461 or 1-800-624-7584

Serving Shelbyville and Shelby County

Blue River Career Center
789 St. Joseph Street
Shelbyville, IN 46176
392-3243 or 1-800-624-7584

Serving the Greater Indianapolis Southwestside

Mooresville High School
550 N. Indiana
Mooresville, IN 46158
831-9203 or 921-4461 or 1-800-624-7584

Serving Lebanon and Boone County

Lebanon High School
510 Essex Drive
Lebanon, IN 46052
482-6806 or 1-800-624-7584

Serving the Indianapolis Eastside

Walker Career Center
9651 East 21st Street
Indianapolis, IN 46229
899-2000 or 1-800-624-7584

Serving Hamilton County

Noblesville High School
300 N. 17th Street
Noblesville, IN 46060
773-6201 or 921-4461 or 1-800-624-7584

Serving Morgan County

Martinsville High School
1360 E. Gray Street
Martinsville, IN 46151
342-8819 or 1-800-624-7584

Serving Greenfield and Hancock County

Greenfield Central High School
810 North Broadway
Greenfield, IN 46140
921-4461 or 1-800-624-7584
Evenings: 462-7984

Serving the Indianapolis Westside at Ben Davis

Ben Davis High School
1200 North Girls School Road
Indianapolis, IN 46214
241-0200 or 921-4461 or 1-800-624-7584

Serving the Indianapolis Northside at Pike High School

Pike High School
6701 Zionsville Road
Indianapolis, IN 46268
921-4461 or 1-800-624-7584

Basic Skills Advancement Program Services

Ivy Tech State College offers a Basic Skills Advancement Program to help ensure the success of students in the completion of their educational goals. The College is concerned about the success of its students, and this program is designed to ensure that every student has the opportunity to be successful.

Divisional Degree Offerings (as of June 1994)

AAS- Associate in Applied Science • AS- Associate in Science • TC- Technical Certificate

HEALTH AND HUMAN SERVICES

Associate in Science Nursing	(AS)
Child Development	(AS)
Human Services Technology	(AAS)
Mental Health, Criminal Justice, Substance Abuse, Gerontology	
Medical Assistant	(AAS, TC)
Occupational Therapy Assistant <i>Beginning January 1995</i>	(AS)
Practical Nursing	(TC)
Radiologic Technology	(AAS)
Respiratory Care Technology	(AAS)
Surgical Technology	(AAS)

BUSINESS

Accounting Technology	(AAS, AS)
Administrative Office Technology	(AAS, AS, TC)
Business Administration	(AAS)
Human Resources, Management, Marketing, Quality Management, Logistics Management, Supervision	
Computer Information Systems	(AAS)
Programming, Microcomputer	
Hospitality Administration	(AAS)
Culinary Arts, Hotel/Restaurant Administration, Baking and Pastry, Institutional Food Service Management	
Paralegal Technology	(AAS)

TECHNOLOGY

Automotive Technology	
Automotive Service (includes cooperative programs with Toyota, General Motors, and Ford Motor Company)	(AAS)
Automotive Body Repair	(TC)
Design Technology	(AAS, TC)
Architectural, Mechanical, Civil	
Electronics	(AAS)
Communications, Industrial Electronics, Microwave Systems	
Industrial Technology	
Heating, Ventilation & Air Conditioning	(AAS, TC)
Industrial Maintenance	(AAS)
Welding	(TC)
Manufacturing	
Computer Integrated Manufacturing	(AAS)
Computer Aided Design and Manufacturing	(AAS)
Computer Numerical Control	(TC)
Quality Assurance	(AAS)
Public Safety	(AAS)
Fire Science, Environmental Care, Hazardous Materials, Public Administration	
Quality Science Technology	(AAS)

GENERAL EDUCATION AND SUPPORT SERVICES

BASIC SKILLS ADVANCEMENT
COMMUNICATIONS
SOCIAL SCIENCES AND HUMANITIES
MATHEMATICS
LIFE AND PHYSICAL SCIENCES

Student Records

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Student Records

An educational record is maintained for each student who is, or has been, enrolled at Ivy Tech State College--Central Indiana Region. In accordance with the Family Educational Rights and Privacy Act of 1974, as amended, the following student rights are covered by the Act and afforded to all students at Ivy Tech State College--Central Indiana Region:

1. The right to inspect and review information contained in the student's educational records.
2. The right to challenge the contents of their educational records.
3. The right to a hearing if the outcome of the challenge is unsatisfactory.
4. The right to submit an explanatory statement for inclusion in the educational record if the outcome of the hearing is unsatisfactory.
5. The right to prevent disclosure, with certain exceptions, of personally identifiable information.
6. The right to secure a copy of the institutional policy.
7. The right to file complaints with the U.S. Department of Education concerning alleged failures by Ivy Tech State College--Central Indiana Region to comply with the provisions of the Act.

Each of these rights, with any limitations or exceptions, is explained in the Institutional Policy Statement, a copy of which may be obtained in the Admissions Office.

At the discretion of College officials, directory information may be provided in accordance with the provisions of the Act without the written consent of the student unless the student requests, in writing, that such information not be disclosed (see below). These items are designated as directory information and may be released for any reason at the discretion of Ivy Tech State College--Central Indiana Region unless a request for nondisclosure is on file:

1. Name, address, telephone number, dates of attendance.
2. Previous institution(s) attended, major field of study, awards, honors, degree conferred.

3. Past and present participation in officially recognized sports and activities, physical factors of athletes (height and weight), date and place of birth.

Students may request the withholding of directory information. Failure on the part of a student to request the withholding of specific categories of directory information indicates the student's approval of disclosure.

Dependency Provision

Ivy Tech State College--Central Indiana Region reserves the right, as allowed under the Federal Educational Rights and Privacy Act of 1974, to disclose educational records or components thereof, without written consent, to parents of dependent students as defined according to the Internal Revenue Code of 1954-- Section 154 (as amended).

However, all Ivy Tech State College--Central Indiana Region students will be assumed to be "independent." A certified copy of the parents' most recent Federal Income Tax Form establishing the student's dependency status shall be required before any educational records or components thereof will be released to the parent of any student. The student will be required to sign a Release of Information Form.

Academic Grading

The academic grading system has both grades and status codes. In certain instances, a status code will appear on the student's record in place of a grade. Status represents a condition to which no letter grade can be assigned. Grades reflect the quality of performance and level of competency achieved by students who complete a course. Instructors determine and assign grades and status based on objective appraisal and evaluation of students' performances. Semester grade reports are sent to each student. T

Grades

The quality of student performance or competency level, as determined by the instructor at the completion of a course, is indicated by a letter grade of A, B, C, D, or F. Each designation has a numerical value per credit hour, referred to as Quality Points/Per Credit. The meaning and quality point value per credit hour of each letter grade is shown in the table that follows:

W-Withdrawal

A "W" status code will be used for student and academic withdrawals. When students find it necessary to withdraw from a course(s), they must give formal notification to the Registrar by completing a drop form. Student Withdrawal (W) is a terminal status, referring to voluntary student withdrawal by a student beginning at the start of the second week of the course up to the end of the week marking the completion of 75 percent of the course.

After 75 percent of the term has elapsed, a student may withdraw only if documented extenuating circumstances are submitted to, and approved by, the Dean of Instructional Affairs or his/her designee. The "W" status code designation will be entered on the student's academic records.

Instructors may also recommend that a student receive a "W" status code for student nonattendance in class or student disciplinary reasons, with final approval from the Chief Administrative Officer or his/her designee.

S-Satisfactory

The "S" indicates satisfactory completion of course work in situations where a status of either satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement.

Although no grade is assigned, credit is earned. Designation of "S" will not count toward degree and certificate graduation requirements.

U-Unsatisfactory

The "U" indicates unsatisfactory completion of course work in situations where a status of either satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement by the Dean of Instructional Affairs or his/her designee. Requests for this type of grading--U--can only be made for non-program related courses and must be declared at time of registration. The "U" differs from an "F" in that quality points are not computed.

V-Verified Competency

The "V" indicates satisfactory completion of course work in situations such as test-out credit for experience or training, or College Level Examination Program (CLEP). Credit gained through this method may be used to satisfy degree requirements. This status is approved by the Dean of Instructional Affairs upon recommendation of a faculty advisor, following completion of necessary verification and documentation of competency.

Students who wish to test out of a class should contact the program advisor before registering for the class. A fee may be charged for the tests.

The general guidelines for test-out are as follows:

1. Test-out examinations should be taken before registration for the class for which the test-out is attempted.
2. Test-out examinations should be taken and completed at one sitting unless the test is offered in two parts, i.e., lab and written exams.
3. Test-out examinations for specific courses are normally attempted only once.
4. Test-out credits are not included in credit computations for Financial Assistance programs or student grade point average.
5. Courses that have been completed cannot be tested out of at a later date. Those courses must be retaken for academic credit.

Transfer Credit

Students can receive credit for courses transferred to Ivy Tech State College--Central Indiana Region. Transfer credit is assigned following an evaluation of equivalence/relevance and is authorized providing the credits were earned with grades of A, B, or C, from a regionally accredited institution, and are not over 10 years old. These credits will be included in earned hours and will appear at the beginning of the student's transcript. Although counted toward graduation, these credits are not used to calculate cumulative GPA. Final authority for Transfer Credit is with the Dean of Instructional Affairs, upon recommendation of the Department/Program head or Registrar.

Credit Hours

Credit is described in semester hours (the number of credits taken per semester). The number of credits is determined by the demands of the course, course work and by the number of contact hours--the hours actually spent in the classroom or laboratory.

Credit Hours/Load

A credit hour represents at least one hour of lecture, three hours of laboratory or three hours of clinical instruction per week for the semester. A three-credit-hour lecture course, for example, meets 48 hours during the semester (3 X 16) weeks. An average full-time class load per semester in most Ivy Tech State College--Central Indiana Region programs consists of 12-15 credit hours. To take a class load more than 17 credit hours, a student must have the approval of the Dean of Instructional Affairs or his/her designee.

Enrollment Status

Enrollment status is determined by the total semester credits being taken:

Full-time:	12 or more credits per semester
3/4 time:	9-11 credits per semester
1/2 time:	6-8 credits per semester
Less than 1/2 time:	1-5 credits per semester

A first-year student, by definition, is one who has completed fewer than 30 semester credit hours; a second-year student is one who has completed 30 or more semester credit hours.

Quality Points

Quality points are numerical values indicating the quality of student performance in credit courses: A=4; B=3; C=2; D=1; F=0. The quality points earned for a course equal the quality point value times the number of credits. A student who earns an A in a 4-credit course earns 16 quality points: the quality point value (4) X the number of credits (4) = total quality points (16).

Grade Point Averages

Beginning Fall, 1990, the GPA is calculated by dividing quality points by quality hours. Quality Hours include all nonbasic skills advancement courses graded A-F.

Earned Hours include all credits that can be applied toward a degree objective. Attempted Hours include all formally enrolled hours.

Beginning Fall, 1985, all courses except skills advancement courses are included in the GPA.

Improving a Grade

Students, with the approval of faculty advisors, may attempt to improve D or F grades by repeating courses (allowable once in most programs). Financial Assistance recipients, however, should review their situations carefully since payment for repeated courses can be disallowed. Permanent student records contain complete files on all activity. The student's grade point average will reflect the highest grade earned.

Petition for Course Exclusion

Under extenuating circumstances, a student may petition the Academic Status Committee to exclude semester hours of course work statistics from the cumulative GPA calculation. Course statistics that are excluded from the cumulative GPA calculation as a result of a petition will not be counted as earned and cannot be used to satisfy requirements for degree-declared students. Petition forms may be obtained from the Registrar's Office.

Academic Standards of Progress

Note: This section applies to the College's academic standards of progress. Students with financial assistance should read the financial assistance section that explains that required standards of progress, along with grades, includes term progress and maximum time frame.

Ivy Tech State College--Central Indiana Region has established this Policy for Academic Standards and Appeal of Standards of Progress.

1. A Student who has declared a degree or certificate objective and has 15 or more cumulative quality hours must maintain a 2.00 minimum cumulative GPA to be considered in satisfactory academic standing.
2. A student who fails to maintain satisfactory academic progress will be subject to a series of intervention activities and related restrictions until such time as he/she restores satisfactory progress or is dismissed as a degree/certificate seeking student due to repeated unsatisfactory progress. The intervention strategies and restriction could include, but are limited to: (1) reduced course load, (2) required counseling sessions, (3) enrollment in Basic Skills Advancement courses, and/or (4) disqualification for graduation.
3. A student who is dismissed for unsatisfactory academic progress faces one term of non-enrollment as a certificate or degree/declared student prior to resuming progress toward that certificate or degree, at which time re-enrollment is allowed on a probationary status.
4. A student who is dismissed twice for unsatisfactory academic progress will be terminated for up to five years as a degree or certificate-declared student unless he/she chooses to participate in an extensive Basic Skills Advancement program.
5. Dismissal from one campus constitutes dismissal from the College. Petition for readmission must be initiated at the site where dismissal occurred via the Academic Status Committee.
6. Satisfactory academic progress is restored when a student successfully earns at least six credit hours and re-establishes a 2.00 cumulative grade point average.

Academic Problems

If a student has a problem with a grade, after discussing the situation with an instructor, if the problem is still not resolved, meets with the program chair. If for some reason the problem cannot be resolved at that level, then the student consults the department chair and finally the or Divisional Chair. After discussion with a Student Affairs Manager or Divisional Chair, if the matter is still not resolved, the student should contact the Dean of Instructional Affairs. The student may be directed to follow the academic appeals process if the student still does not agree with the solution.

Dean's List

The Dean's List, prepared and published each semester, gives recognition to students who achieve a minimum 3.50 grade point average or higher with no D or F grades while earning 12 or more credits during the semester or eight or more semester credit hours for the summer session. The Dean's List is posted on the bulletin boards in the North Meridian Center and on bulletin boards in the Technology Center and East Washington Street Center. The Dean's List is released to the press after the completion of each semester.

Attendance

Regular attendance is expected at scheduled class meetings or other activities assigned as part of a course of instruction. Attendance records are kept by instructors.

Graduation

The Associate in Science degree, the Associate in Applied Science degree, or the Technical Certificate is awarded by the College to students who meet graduation and certification eligibility requirements. Graduation ceremonies are held each spring. Graduating students are charged a fee to cover the cost of the ceremonial cap and gown.

A student is considered eligible for graduation when the requirements for graduation or certification have been fulfilled in the selected program. Each student entering the final semester prior to graduation must complete an Application for Graduation form. The application will be certified by the student's program advisor and forwarded to the Registrar's Office, where the appropriate diploma will be prepared.

To graduate with the Associate in Science Degree, Associate in Applied Science Degree or Technical Certificate students must:

1. Successfully complete all courses within certification requirements with a cumulative grade point index of at least 2.0.
2. Successful completion of the required number of credits.
3. Completion of at least 15 degree credits as a regular student of Ivy Tech, and not through test-out or other means of advanced placement.
4. Satisfaction of all financial obligations due the College.
5. Satisfaction of program accreditation standards that may have additional requirements.

Technology

Design TechnologyAAS, TC
 Architectural
 Mechanical
 Civil

ElectronicsAAS
 Communications
 Industrial Electronics
 Microwave Systems

Automotive Technology
 Automotive Service (includes cooperative programs
 with Toyota, General Motors, and
 Ford Motor Company)AAS
 Automotive Body RepairTC

Manufacturing
 Computer Integrated ManufacturingAAS
 Computer Aided Design and ManufacturingAAS
 Computer Numerical ControlTC
 Quality AssuranceAAS

Industrial Technology
 Heating, Ventilation & Air ConditioningAAS, TC
 Industrial MaintenanceAAS
 WeldingTC

Public SafetyAAS
 Fire Science
 Environmental Care
 Hazardous Materials
 Public Administration

Quality Science TechnologyAAS

AAS- Associate in Applied Science
AS- Associate in Science
TC- Technical Certificate

Design Technology

The Design Technology Program is competency-based and is designed to be responsive to the needs of business and industry. The program provides an environment conducive to the development of general knowledge, technical skills and critical thinking skills so graduates may enter their profession as entry-level technicians. They also will be prepared to respond to future advances and changes in their profession. Included is a blend of traditional “board” techniques with the latest hardware and software used in industry today. This balance of skills in both areas help provide students with the diversity necessary to be competitive in the job market. Graduates will have the necessary skills to choose related careers or continue their education at other post-secondary institutions.

Associate in Applied Science degrees require 64 credits. Specialties include architecture, civil, computer-aided drafting design and manufacturing, heating, ventilation and air conditioning, and mechanical.

Technical and career development certificates also are available.

Associate in Applied Science (AAS)--Design Technology/Architectural Specialty*

GENERAL EDUCATION CORE (19 Credits)

COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
MAT	121	Geometry/Trigonometry	3
PHY	101	Physics I	4
ELECTIVE:		Humanities/Social Sciences	3

TECHNICAL CORE (21 Credits)

DSN	103	CAD Fundamentals	3
DSN	106	Descriptive Geometry	3
DSN	220	Advanced CAD	3
DSN	221	Statics	3
DSN	222	Strength of Materials	3
TEC	102	Technical Graphics	3
TEC	104	Computer Fundamentals for Technology	3

SPECIALTY CORE (12 Credits)

DCT	105	Facilities Design and Layout	3
DCT	109	Construction Materials and Specifications	3
DCT	204	Architectural CAD	3
DCT	208	Structural Detailing	3

REGIONALLY DETERMINED CORE (12 Credits)

DCT	113	Intermediate CAD	3
DCT	202	CAD Programming Language	3
DCT	206	Mechanical and Electrical Equipment	3
DCT	210	Surveying I	3

TOTAL CREDITS64

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and the American Design Drafting Association (ADDA).

Associate in Applied Science (AAS)--Design Technology/Mechanical Specialty*.

GENERAL EDUCATION CORE (19 Credits)			
COM	101	Fundamentals of Public Speaking	.3
ENG	111	English Composition	.3
MAT	111	Intermediate Algebra	.3
MAT	121	Geometry/Trigonometry	.3
PHY	101	Physics I	.4
ELECTIVE:		Humanities/Social Sciences	.3
TECHNICAL CORE (21 Credits)			
DSN	103	CAD Fundamentals	.3
DSN	106	Descriptive Geometry	.3
DSN	220	Advanced CAD	.3
DSN	221	Statics	.3
DSN	222	Strength of Materials	.3
TEC	102	Technical Graphics	.3
TEC	104	Computer Fundamentals for Technology	.3
SPECIALTY CORE (12 Credits)			
DCT	104	Product Drafting	.3
DCT	202	CAD Programming Language	.3
DCT	217	Product Design	.3
TEC	101	Manufacturing Processes	.3
REGIONALLY DETERMINED CORE (12 Credits)			
DCT	105	Facilities Design and Layout	.3
DCT	113	Intermediate CAD	.3
DCT	201	Schematic Drafting	.3
DCT	216	Jig and Fixture Design	.3
TOTAL CREDITS			.64

*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and the American Design Drafting Association (ADDA).

Associate in Applied Science (AAS)--Design Technology/Civil Specialty*

GENERAL EDUCATION CORE (19 Credits)			
COM	101	Fundamentals of Public Speaking	.3
ENG	111	English Composition	.3
MAT	111	Intermediate Algebra	.3
MAT	121	Geometry/Trigonometry	.3
PHY	101	Physics I	.4
ELECTIVE:		Humanities/Social Sciences	.3
TECHNICAL CORE (21 Credits)			
DSN	103	CAD Fundamentals	.3
DSN	106	Descriptive Geometry	.3
DSN	220	Advanced CAD	.3
DSN	221	Statics	.3
DSN	222	Strength of Materials	.3
TEC	102	Technical Graphics	.3
TEC	104	Computer Fundamentals for Technology	.3
SPECIALTY CORE (12 Credits)			
DCT	109	Construction Materials & Specifications	.3
DCT	208	Structural Detailing	.3
DCT	210	Surveying I	.3
DCT	213	CAD Mapping	.3
REGIONALLY DETERMINED CORE (12 Credits)			
DCT	113	Intermediate CAD	.3
DCT	202	CAD Programming Language	.3
DCT	228	Civil I	.3
DCT	229	Civil II	.3
TOTAL CREDITS			.64

*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and the American Design Drafting Association (ADDA).

Technical Certificate (TC)--Design Technology

GENERAL EDUCATION CORE (6 Credits)

ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3

TECHNICAL CORE (3 Credits)

TEC	104	Computer Fundamentals for Technology	3
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SPECIALTY CORE (6 Credits)

DSN	103	CAD Fundamentals	3
TEC	102	Technical Graphics	3

REGIONALLY DETERMINED CORE (18 Credits)

DCT	113	Intermediate CAD	3
DCT	104	Product Drafting	3
DCT	105	Facilities Design and Layout	3
DSN	106	Descriptive Geometry	3
ELECTIVE:		Humanities/Social Sciences	3

Students should select 3 credits from the following:

DCT	109	Construction Materials and Specifications	3
MAT	110	Contemporary College Mathematics	3
TEC	101	Manufacturing Processes	3

TOTAL CREDITS	33
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Electronics Technology

The Electronics Technology Program is competency-based and is designed to meet the on-going needs of business, industry and the student. The program is structured to develop the technical skills, general knowledge, and the critical thinking and problem solving abilities of graduates, thereby assisting the student in adapting to changes in the work environment and allowing advancement in the field. Additionally, the program prepares graduates to transfer into baccalaureate degree- granting institutions.

Associate in Applied Science degrees require 66 credits. Specialties include communications, industrial electronics and microwave systems. Post-curriculum specialization courses and career development certificates are available.

Associate in Applied Science (AAS)--Electronics Technology/Communications Specialty*

GENERAL EDUCATION CORE (23 Credits)

COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	131	Algebra/Trigonometry I	3
MAT	132	Algebra/Trigonometry II	3
PHY	101	Physics I	4
PHY	102	Physics II	4
ELECTIVE:		Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)

ELT	100	Circuits I	4
ELT	101	Circuits II	4
ELT	103	Digital Principles	3
ELT	105	Solid State I	4
TEC	104	Computer Fundamentals for Technology	3

SPECIALTY CORE (13 Credits)

ELT	201	Solid State II	4
ELT	228	Communications Electronics	3
ELT	229	Telecommunications	3
ELT	230	Advanced Communications Electronics	3

REGIONALLY DETERMINED CORE (12 Credits)

ELT	106	Digital Applications	4
ELT	202	Microprocessors	4
ELT	227	Peripherals	3
ELT	288.01	Special Topics in Solid State	1

TOTAL CREDITS66

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and the Federal Aviation Administration (FAA) Airway Facilities Collegiate Training Initiative (AF-CTI).

Associate in Applied Science (AAS)--Electronics Technology/Microwave Systems Specialty*

GENERAL EDUCATION CORE (23 Credits)			
COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	131	Algebra/Trigonometry I	3
MAT	132	Algebra/Trigonometry II	3
PHY	101	Physics I	4
PHY	102	Physics II	4
ELECTIVE:		Humanities/Social Sciences	3
TECHNICAL CORE (18 Credits)			
ELT	100	Circuits I	4
ELT	101	Circuits II	4
ELT	103	Digital Principles	3
ELT	105	Solid State I	4
TEC	104	Computer Fundamentals for Technology	3
SPECIALTY CORE (13 Credits)			
ELT	201	Solid State II	4
ELT	227	Peripherals	3
ELT	229	Telecommunications	3
ELT	231	Microwave	3
REGIONALLY DETERMINED CORE (12 Credits)			
ELT	106	Digital Applications	4
ELT	202	Microprocessors	4
ELT	228	Communications Electronics	3
ELT	288.01	Special Topics in Solid State	1
TOTAL CREDITS			66

*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT).

Automotive Technology

The Automotive Technology Program prepares students with the general and technical education needed for successful careers in automotive service, sales, technical support, management and customer relations, and for continuation in higher education. A student in the Automotive Technology Program may specialize in automotive body repair or automotive service.

A two-year program requiring 70 credits leads to an Associate in Applied Science degree. Technical and career development certificates also are available.

Associate in Applied Science (AAS)--Automotive Technology/Automotive Service Specialty*

GENERAL EDUCATION CORE (19 Credits)

COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
MAT	121	Geometry/Trigonometry	3
PHY	110	Technical Physics	4
ELECTIVE:		Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)

AMV	100	Introduction to Transportation	3
AMV	101	Chassis/Suspension Principles	3
AMV	107	Engine Principles & Design	3
AMV	113	Electricity for Transportation	3
AMV	202	Computer Engine Controls	3
TEC	104	Computer Fundamentals for Technology	3

SPECIALTY CORE (12 Credits)

AST	105	Fuel Systems	3
AST	201	Heating & Air Conditioning Principles	3
AST	209	Automotive Braking Systems	3
AST	220	Transmission & Driveline Service	3

REGIONALLY DETERMINED CORE (21 Credits)

AST	102	Two/Four Wheel Alignment	3
AST	104	Start and Charge Systems	3
AST	203	Engine Rebuild	3
AST	204	Automatic Transmission/Transaxle	3
AST	205	Manual Transmission/Transaxle	3
AST	207	Engine Performance	3
AST	288.04	Electronic & Accessory Systems	3

TOTAL CREDITS70

*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and in all eight areas of Automotive Service Excellence (ASE) by the National Automotive Technicians Education Foundation (NATEF).

Associate in Applied Science (AAS)--Automotive Technology/T-TEN-Toyota Specialty*

The Toyota Technical Education Network (T-TEN) is a joint effort of Toyota Motor Sales USA and Ivy Tech. T-TEN has been developed to fill the growing need for technically competent apprentice technicians for dealerships. Through a cooperative link with Ivy Tech, Toyota will offer a variety of unique education benefits: (1) Latest Toyota Training Courses and Instructional Materials; (2) Dealership Work-Study Opportunity; (3) Student Scholarships; (4) Dealership Placement Assistance; (5) State-of-the-art Training Components and Vehicles; and (6) Student will earn an Associate in Applied Science Degree and Toyota Certification.

The program requires completion of 70 credits for an Associate in Applied Science Degree.

GENERAL EDUCATION CORE (19 Credits)

COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
MAT	121	Geometry/Trigonometry	3
PHY	110	Technical Physics	4
ELECTIVE:		Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)

AMV	100	Introduction to Transportation	3
AMV	101	T-TEN Chassis and Suspension	3
AMV	107	Engine Principles & Design	3
AMV	113	Toyota Electrical Circuits	3
AMV	202	Toyota Computer Control Systems	3
TEC	104	Computer Fundamentals for Technology	3

SPECIALTY CORE (12 Credits)

AST	105	Toyota Fuel Systems	3
AST	201	Toyota Climate Control	3
AST	209	T-TEN Braking Systems	3
AST	220	Toyota Transmission/Transaxle Service	3

REGIONALLY DETERMINED CORE (21 Credits)

AST	102	T-TEN Alignment	3
AST	104	T-TEN Start and Charge Systems	3
AST	203	Engine Rebuild	3
AST	204	Automatic Transmission/Transaxle	3
AST	205	Toyota Manual Transmission/Transaxle	3
AST	207	Toyota Engine Performance	3
AST	288.03	Toyota Electronics & Accessory Systems	3

TOTAL CREDITS 70

NOTE: T-TEN — Toyota Technical Education Network

*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and in all eight areas of Automotive Service Excellence (ASE) by the National Automotive Technicians Education Foundation (NATEF).

Associate in Applied Science (AAS)--Automotive Technology/ASEP-General Motors Specialty*

The Automotive Service Educational Program (ASEP) is a two-year automotive program designed to upgrade the technical competence and professional level of the incoming dealership technician. ASEP has been designed by General Motors and Ivy Tech to offer the latest technical information by attending classroom lectures and laboratory sessions followed by cooperative work experiences in a sponsoring General Motors dealership.

The program requires completion of 70 credits for an Associate in Applied Science Degree.

GENERAL EDUCATION CORE (19 Credits)			
COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
MAT	121	Geometry/Trigonometry	3
PHY	110	Technical Physics	4
ELECTIVE:		Humanities/Social Sciences	3
TECHNICAL CORE (18 Credits)			
AMV	100	GM Introduction to Transportation	3
AMV	101	GM STG Suspension and Steering	3
AMV	107	GM Engine Principles & Design	3
AMV	113	GM STG Specialized Electronics Training	3
AMV	202	GM Computer Engine Controls	3
TEC	104	Computer Fundamentals for Technology	3
SPECIALTY CORE (12 Credits)			
AST	105	GM Fuel Systems	3
AST	201	GM STG Climate Control	3
AST	209	GM STG Braking Systems/RWAL/4WAL	3
AST	220	GM STG Transaxle/Driveline Service	3
REGIONALLY DETERMINED CORE (21 Credits)			
AST	102	GM STG Steering and Alignment	3
AST	104	GM Start and Charge Systems	3
AST	203	GM Engine Rebuild	3
AST	204	GM Automatic Transmission/Transaxle	3
AST	205	GM Manual Transmission/Transaxle	3
AST	207	GM STG Drivability	3
AST	288.01	GM STG Electronic and Accessory Systems	3
TOTAL CREDITS			70

*ASEP--Automotive Service Education Program

Associate in Applied Science (AAS)--Automotive Technology/ASSET-Ford Motor Co. Specialty*

Automotive Student Service Educational Training (ASSET) is a joint effort of Ford Motor Company, Ford and Lincoln-Mercury dealers and Ivy Tech. It is a two-year program designed to develop entry-level service technicians for Ford and Lincoln-Mercury dealerships. The ASSET program has been carefully designed to provide Ford and Lincoln-Mercury dealerships and their customers with well-qualified, Ford-trained and certified service technicians who are proficient in the latest automotive service technologies and methods. In addition, the program: (1) Ensures that ASSET-trained service technicians are able to understand and work with new systems and components as they are introduced; (2) Enables ASSET-trained personnel to make rapid advancements in their career paths - after additional dealership experience.

The program requires completion of 70 credits for an Associate in Applied Science Degree.

GENERAL EDUCATION CORE (19 Credits)			
COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
MAT	121	Geometry/Trigonometry	3
PHY	110	Technical Physics	4
ELECTIVE:		Humanities/Social Sciences	3
TECHNICAL CORE (18 Credits)			
AMV	100	Ford Introduction to Transportation	3
AMV	101	Ford STST Suspension and Steering	3
AMV	107	Ford Engine Principles & Design	3
AMV	113	Basic Electricity STST Certification	3
AMV	202	Ford STST Electronic Engine Controls	3
TEC	104	Computer Fundamentals for Technology	3
SPECIALTY CORE (12 Credits)			
AST	105	Ford Fuel Systems	3
AST	201	Ford STST Climate Control	3
AST	209	Ford Automotive Braking Systems	3
AST	220	Ford Transaxle & Driveline Service	3
REGIONALLY DETERMINED CORE (21 Credits)			
AST	102	Ford STST Steering	3
AST	104	Ford Start and Charge Systems	3
AST	203	Ford STST Engine Repair	3
AST	204	Ford Automatic Transmission/Transaxle	3
AST	205	Ford Manual Transmission/Transaxle	3
AST	207	Ford STST Advanced Engine Performance	3
AST	288.02	Ford STST Electronic and Accessory Systems	3
TOTAL CREDITS			70

Note: ASSET--Automotive Student Service Educational Training

*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and in all eight areas of Automotive Service Excellence (ASE) by the National Automotive Technicians Education Foundation (NATEF) in all eight areas.

The Automotive Body Repair Specialty prepares students to become qualified body repair technicians. Courses are offered in body, frame, unibody, collision damage, paint refinishing, fiberglass/plastics repair, sheet metal repair, and welding. Training laboratories offer experience on up-to-date, sophisticated pulling systems used in precision alignment.

GENERAL EDUCATION CORE (6 Credits)

COM 102	Introduction to Interpersonal Relations	3
ELECTIVE:	Mathematics/Social Sciences/Humanities/Life/Physical Sciences	3

AMV	101	Chassis and Suspension Principles	3
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ABR	101	Body Repair Fundamentals	3
ABR	103	Auto Paint Fundamentals	3

ABR	104	Collision Damage Analysis and Repair	3
ABR	105	Conventional Frame Diagnosis and Correction	3
ABR	106	Body Repair Applications	3
ABR	107	Automotive Refinishing Technology	3
ABR	108	Unibody Structural Analysis and Repair	3
ABR	120	Fiberglass/Plastic Repair	3
ABR	288.01	Glass and Accessory Systems	3
WLD	207	Gas Metal Arc (MIG) Welding	3

TOTAL CREDITS 39

Manufacturing Technology

The Manufacturing Technology Program is a multi-disciplinary program designed to prepare students for technician-level positions. Specialty areas allow students to choose an emphasis in quality assurance, computer-integrated manufacturing, computer-aided design, or computer numerical control. Graduates are prepared to perform many facets of manufacturing including set-up, troubleshooting, processing and quality control.

Skills are acquired through lectures, demonstrations, and hand-on experiences. Lab activities include the use of modern equipment and techniques currently found in industry. This provides a foundation for any graduate to enter the workforce and continue skill enhancement.

Associate in Applied Science degrees require 61-64 credits in Manufacturing Technology.

Associate in Applied Science (AAS)--Manufacturing Technology/Computer Integrated Manufacturing (CIM) Specialty*

GENERAL EDUCATION CORE (19 Credits)

COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
MAT	121	Geometry/Trigonometry	3
PHY	101	Physics I	4
ELECTIVE:		Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)

IDS	104	Fluid Power Basics	3
QSC	101	Quality Control Concepts & Techniques I	3
TEC	101	Manufacturing Processes	3
TEC	102	Technical Graphics	3
TEC	104	Computer Fundamentals for Technology	3
TEC	113	Basic Electricity	3

SPECIALTY CORE (15 Credits)

AMT	102	Introduction to Robotics	3
AMT	201	Manufacturing Systems Control	3
AMT	202	Work Cell Design and Integration	3
AMT	203	Automation Electronics	3
AMT	205	Automated Manufacturing Systems	3

REGIONALLY DETERMINED CORE (12 Credits)

AMT	288.01	Special Topics	2
DSN	103	CAD Fundamentals	3
ELT	103	Digital Principles	4
MTT	208	CNC Programming I	3

TOTAL CREDITS 64

*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT)

Associate in Applied Science (AAS)--Manufacturing Technology/Computer Aided Design and Manufacturing (CAD/CAM) Specialty*

GENERAL EDUCATION CORE (19 Credits)		
COM	101	Fundamentals of Public Speaking3
ENG	111	English Composition3
MAT	111	Intermediate Algebra3
MAT	121	Geometry/Trigonometry3
PHY	101	Physics I4
ELECTIVE:		Humanities/Social Sciences3
TECHNICAL CORE (18 Credits)		
IDS	104	Fluid Power Basics3
QSC	101	Quality Control Concepts & Techniques I3
TEC	101	Manufacturing Processes3
TEC	102	Technical Graphics3
TEC	104	Computer Fundamentals for Technology3
TEC	113	Basic Electricity3
SPECIALTY CORE (15 Credits)		
DSN	103	CAD Fundamentals3
MTT	106	Advanced Print Interpretation3
MTT	208	CNC Programming I3
MTT	220	CAD/CAM I3
MTT	221	CAD/CAM II3
REGIONALLY DETERMINED CORE (12 Credits)		
MTT	102	Turning Processes I3
MTT	103	Milling Processes I3
MTT	204	Abrasive Processes3
MTT	209	CNC Programming II3
TOTAL CREDITS		64
*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT)		

Technical Certificate (TC)--Manufacturing Technology/Computer Numerical Control (CNC) Specialty

GENERAL EDUCATION CORE (6 Credits)		
COM	102	Introduction to Interpersonal Relations3
MAT	111	Intermediate Algebra3
TECHNICAL CORE (3 Credits)		
TEC	104	Computer Fundamentals for Technology3
SPECIALTY CORE (6 Credits)		
MTT	208	CNC Programming I3
MTT	209	CNC Programming II3
REGIONALLY DETERMINED CORE (24 Credits)		
MAT	121	Geometry/Trigonometry3
MTT	102	Turning Processes I3
MTT	103	Milling Processes I3
MTT	106	Advanced Print Reading3
MTT	204	Abrasive Processes3
MTT	210	Interactive CNC3
QSC	203	Metrology3
TEC	102	Technical Graphics3
TOTAL CREDITS		39

Associate in Applied Science (AAS)--Manufacturing Technology/Quality Assurance Specialty

GENERAL EDUCATION CORE (19 Credits)		
COM	101	Fundamentals of Public Speaking3
ENG	111	English Composition3
MAT	111	Intermediate Algebra3
MAT	121	Geometry/Trigonometry3
PHY	101	Physics I4
ELECTIVE:		Humanities/Social Sciences3
TECHNICAL CORE (18 Credits)		
IDS	104	Fluid Power Basics3
QSC	101	Quality Control Concepts & Techniques I3
TEC	101	Manufacturing Processes3
TEC	102	Technical Graphics3
TEC	104	Computer Fundamentals for Technology3
TEC	113	Basic Electricity3
SPECIALTY CORE (12 Credits)		
QSC	102	Statistical Process Control3
QSC	201	Advanced Statistical Process Control3
QSC	202	Quality Control Concepts & Techniques II3
QSC	204	Total Quality Management3
REGIONALLY DETERMINED CORE (12 Credits)		
CHM	101	Chemistry I3
DSN	103	CAD Fundamentals3
QSC	203	Metrology3
PST	121	Industrial Safety3
TOTAL CREDITS		61

*Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT)

Industrial Technology

The Industrial Technology Program is a discipline devoted to the development of skills necessary for the installation, operation and maintenance of industrial equipment and systems. The curriculum is broad-based and offers a diversity of specialties, but focuses on the integration of each area as used in systemic applications. This requires proficiency in mathematics, communication, physics and basic computer skills, as well as the technical subject matter.

In laboratory applications of classroom study, each student uses the tools and instruments associated with the practice of the industrial technology specialty including volt-ohm meters, leak detectors, sonic diagnostic tools, pressure and level testing devices, preventive maintenance software programs, welding and brazing equipment, metallurgical testing instruments, hand tools, and electronic and hand precision measuring devices. Safety equipment and the safe use of tools and materials are integrated into each course in the curriculum.

Associate in Applied Science degrees require 61-64 credits in industrial technology. Specialties are available in heating, ventilation and air conditioning, industrial maintenance, and welding. Technical certificates and career development certificates are available.

Associate in Applied Science (AAS)--Industrial Technology/Heating, Ventilation and Air Conditioning Specialty

GENERAL EDUCATION CORE (19 Credits)

COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
MAT	121	Geometry/Trigonometry	3
PHY	110	Technical Physics	4
ELECTIVE:		Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)

IDS	102	Introduction to Print Reading	3
IDS	103	Motors and Motor Controls	3
IDS	114	Introductory Welding	3
QSC	101	Quality Control Concepts & Techniques I	3
TEC	104	Computer Fundamentals for Technology	3
TEC	113	Basic Electricity	3

SPECIALTY CORE (15 Credits)

HEA	101	Heating Fundamentals	3
HEA	103	Refrigeration I	3
HEA	104	Heating Service	3
HEA	106	Refrigeration II	3
HEA	202	Electrical Circuits and Controls	3

REGIONALLY DETERMINED CORE (12 Credits)

HEA	201	Cooling Service	3
HEA	205	Heat Pump Service	3
HEA	212	Advanced HVAC Controls	3
HEA	220	Air Distribution Systems	3

TOTAL CREDITS 64

Associate in Applied Science (AAS)--Industrial Technology/Industrial Maintenance Specialty

GENERAL EDUCATION CORE (19 Credits)

COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
MAT	121	Geometry/Trigonometry	3
PHY	110	Technical Physics	4
ELECTIVE:		Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)

IDS	102	Introduction to Print Reading	3
IDS	103	Motors and Motor Controls	3
IDS	114	Introductory Welding	3
QSC	101	Quality Control Concepts & Techniques I	3
TEC	104	Computer Fundamentals for Technology	3
TEC	113	Basic Electricity	3

SPECIALTY CORE (15 Credits)

AMT	201	Manufacturing Systems Control	3
IDS	104	Fluid Power Basics	3
IMT	201	Fluid Power Systems	3
IMT	203	Machine Installation	3
IMT	207	Electrical Circuits	3

REGIONALLY DETERMINED CORE (12 Credits)

IMT	105	Heating and Air Conditioning Basics	3
IMT	107	Preventative Maintenance	3
IMT	210	Pumps	3

Students should select 3 credits from the following courses:

AMT	102	Introduction to Robotics	3
IMT	106	Millwright I	3

TOTAL CREDITS 64

Technical Certificate (TC)--Industrial Technology/Welding Specialty

GENERAL EDUCATION CORE (6 Credits)

COM 102	Introduction to Interpersonal Relations	3
ELECTIVE:	Mathematics/Social Sciences/Life/Physical Science	3

TECHNICAL CORE (3 Credits)

TEC 113	Basic Electricity	3
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SPECIALTY CORE (6 Credits)

WLD 108	Shielded Metal Arc Welding I	3
WLD 207	Gas Metal Arc (MIG) Welding	3

REGIONALLY DETERMINED CORE (24 Credits)

IDS 102	Introduction to Print Reading	3
WLD 109	Oxyacetylene Gas Welding and Cutting	3
WLD 110	Welding Fabrication	3
WLD 120	Metallurgy Fundamentals	3
WLD 203	Pipe Welding	3
WLD 206	Shielded Metal Arc Welding II	3
WLD 208	Gas Tungsten Arc Welding I	3
WLD 209	Welding Certification	3

TOTAL CREDITS	39
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Public Safety

The Public Safety Technology Program is designed to meet the ongoing needs of municipalities, students, businesses, and industries. The program develops technical skills, general knowledge, critical thinking, and problem solving abilities. Broad-based technical skills and critical thinking processes assist students in adapting to changes in the work environment and promoting successful advancement on the job. Additionally, the program prepares graduates to transfer to baccalaureate degree-granting institutions if they wish to continue their education.

Specialty areas allow students to choose an emphasis in environmental care, fire science, hazardous materials, or public administration. Associate in Applied Science degrees require 60-63 credits.

Associate in Applied Science (AAS)--Public Safety/Fire Safety Specialty

GENERAL EDUCATION CORE (18 Credits)

CHM	101	Chemistry I	3
COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
POL	101	Introduction to American Government and Politics	3
SCI	111	Physical Science	3

TECHNICAL CORE (18 Credits)

PST	120	First Responder	3
PST	121	Industrial Safety & Loss Prevention	3
PST	220	Incident Management System	3
PST	221	Design & Planning for Prevention & Protection	3
TEC	104	Computer Fundamentals for Technology	3
TEC	106	Hazardous Materials & Control	3

SPECIALTY CORE (15 Credits)

AFS	102	Fire Apparatus and Equipment	3
AFS	103	Strategy and Tactics	3
AFS	201	Fire Protection Systems	3
AFS	202	Fire Service Management	3
AFS	204	Fire Service Hydraulics	3

REGIONALLY DETERMINED CORE (12 Credits)

AFS	101	Fire Technology	3
AFS	105	Fir and Arson Investigation	3
AFS	108	Fire Prevention/Inspection	3
AFS	109	Fire Department Specifications	3

TOTAL CREDITS63

Associate in Applied Science (AAS)--Public Safety/Environmental Care Specialty

GENERAL EDUCATION CORE (18 Credits)

CHM	101	Chemistry I	3
COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
POL	101	Introduction to American Government and Politics	3
SCI	111	Physical Science	3

TECHNICAL CORE (18 Credits)

PST	120	First Responder	.3
PST	121	Industrial Safety & Loss Prevention	.3
PST	220	Incident Management System	.3
PST	221	Design & Planning for Prevention & Protection	.3
TEC	104	Computer Fundamentals for Technology	.3
TEC	106	Hazardous Materials & Control	.3

SPECIALTY CORE (15 Credits)

BIO	111	Microbiology	3
HMT	200	Environmental Protection Agency (EPA) Regulations	3
ILT	101	Industrial Lab Techniques	3
QSC	101	Quality Control Concepts & Techniques I	3
TEC	113	Basic Electricity	3

REGIONALLY DETERMINED CORE (12 Credits)

ENV	104	Plant Operations-Sanitary3
ENV	208	Plant Operations-Industrial3
ILT	288.01	Advanced Municipal Wastewater Treatment3
Elective course in General Education3

TOTAL CREDITS63

Associate in Applied Science (AAS)--Public Safety/Hazardous Materials Specialty

GENERAL EDUCATION CORE (18 Credits)			
CHM	101	Chemistry I	.3
COM	101	Fundamentals of Public Speaking	.3
ENG	111	English Composition	.3
MAT	111	Intermediate Algebra	.3
POL	101	Introduction to American Government and Politics	.3
SCI	111	Physical Science	.3
TECHNICAL CORE (18 Credits)			
PST	120	First Responder	.3
PST	121	Industrial Safety & Loss Prevention	.3
PST	220	Incident Management System	.3
PST	221	Design & Planning for Prevention & Protection	.3
TEC	104	Computer Fundamentals for Technology	.3
TEC	106	Hazardous Materials & Control	.3
SPECIALTY CORE (12 Credits)			
HMT	100	OSHA Regulations	.3
HMT	120	Hazard Communication Standard	.3
HMT	200	Environmental Protection Agency (EPA) Regulations	.3
HMT	220	Hazardous Materials Recovery, Incineration and Disposal	.3
REGIONALLY DETERMINED CORE (12 Credits)			
HMT	104	HAZMAT Health Effects	.3
HMT	201	Contingency Planning	.3
HMT	203	Sampling Procedures	.3
HMT	205	DOT Regulations	.3
TOTAL CREDITS			.60

Associate in Applied Science (AAS)--Public Safety/Public Administration Specialty

GENERAL EDUCATION CORE (18 Credits)

CHM	101	Chemistry 1	3
COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
POL	101	Introduction to American Government and Politics	3
SCI	111	Physical Science	3

TECHNICAL CORE (18 Credits)

PST	120	First Responder	3
PST	121	Industrial Safety & Loss Prevention	3
PST	220	Incident Management System	3
PST	221	Design & Planning for Prevention & Protection	3
TEC	104	Computer Fundamentals for Technology	3
TEC	106	Hazardous Materials & Control	3

SPECIALTY CORE (12 Credits)

BUS	105	Principles of Management	3
BUS	208	Organizational Behavior	3
SUP	102	Techniques of Supervision 1	3
SUP	224	Operations Management	3

REGIONALLY DETERMINED CORE (12 Credits)

ACC	101	Accounting Principles	3
AFS	202	Fire Service Management	3
PST	288.01	Public Administration	3
PST	288.02	Internship	3

TOTAL CREDITS60

Quality Science

The Quality Science Program is competency-based and is designed to meet the ongoing needs of business, industry and the student. The program develops technical skills, general knowledge, and critical thinking and problem solving abilities of program graduates. The program is based upon the latest technology available and makes extensive use of the laboratory to complete the theory-to-practice cycle. Broad-based technical skills and critical thinking processes assist the student in adapting to changes in the work environment and allow advancement in the field. Additionally, the program prepares graduates to transfer into baccalaureate degree-granting institutions for those who wish to continue their education.

The Associate in Applied Science degrees require 64 credit hours.

Associate in Applied Science (AAS)--Quality Science

GENERAL EDUCATION CORE (22 Credits)

CHM	101	Chemistry I	.3
COM	101	Fundamentals of Public Speaking	.3
ENG	111	English Composition	.3
MAT	115	Statistics	.3
MAT	131	Algebra/Trigonometry I	.3
PHY	110	Technical Physics	.4
SOC	111	Introduction to Sociology	.3

TECHNICAL CORE (18 Credits)

QSC	101	Quality Control Concepts & Techniques I	.3
QSC	102	Statistical Process Control	.3
QSC	204	Total Quality Management	.3
TEC	101	Manufacturing Processes	.3
TEC	104	Computer Fundamentals for Technology	.3
TEC	106	Hazardous Materials & Control	.3

SPECIALTY CORE (12 Credits)

CHM	102	Chemistry II	.3
ILT	101	Industrial Lab Techniques	.3
ILT	201	Industrial Instrumentation Techniques I	.3
ILT	202	Industrial Instrumentation Techniques II	.3

REGIONALLY DETERMINED CORE (12 Credits)

BIO	111	Microbiology	.3
CHM	103	Chemistry III	.4
ILT	288.02	Special Topics in Environmental Monitoring	.2
MAT	132	Algebra/Trigonometry II	.3

TOTAL CREDITS64

Health and Human Services

Associate in Science NursingAS

Child DevelopmentAS, TC

Human Services TechnologyAAS

Generalist

Mental Health

Criminal Justice

Substance Abuse

Gerontology

Medical AssistantAAS, TC

Occupational Therapy Assistant (Beginning January 1995) .AS

Practical NursingTC

Radiologic TechnologyAAS

Respiratory Care TechnologyAAS

Surgical TechnologyAAS

AAS- Associate in Applied Science

AS- Associate in Science

TC- Technical Certificate

Associate in Science Nursing (ASN)

The Central Indiana Region is approved by the Indiana Commission for Higher Education to offer a two-year generic Associate of Science (AS) nursing program. The program is also accredited by the National League for Nursing. Graduates are eligible to write the NCLEX-RN examination to become Registered Nurses. This program accommodates both students interested in nursing as a career and Licensed Practical Nurses choosing to continue their nursing education.

ADMISSION CRITERIA

FOR COLLEGE ADMISSION:

- Certificate of High School Graduation or GED
- SAT or ACT Scores* or College Assessment**

FOR ASN ADMISSION:

- PSB Nursing School Aptitude Exam

FOR LPNS:

- NLN Mobility Exam #1

* Test may be waived by college transcript with grades of "C" or better within past 10 years for required science courses.

** Test may be waived by college level courses in English Composition, Science and Math with passing grades of "C" or better within past 10 years.

FOR ALL NURSING STUDENTS:

Physical health form and immunizations completed prior to registration for any clinical course.

GENERAL EDUCATION CORE (28 Credits)

ANP	101	Anatomy and Physiology I	.3
ANP	102	Anatomy and Physiology II	.3
ANP	201	Advanced Physiology	.4
BIO	111	General Microbiology	.3
CHM	101	Chemistry I OR	
MAT	111	Intermediate Algebra	.3
CIS	101	Intro to Microcomputers OR	
SOC	111	Intro to Sociology	.3
COM	101	Fundamentals of Public Speaking OR	
COM	102	Intro to Interpersonal Communication	.3
ENG	111	English Composition	.3
PSY	101	Intro to Psychology	.3
PSY	201	Lifespan Development	.3

Following is curriculum for the student with no prior nursing credentials:

TECHNICAL CORE CORE (38 Credits)

NUR	101	Fundamental Nursing Concepts	.4
NUR	102	Fundamental Nursing Concepts Practicum	.4
NUR	103	Life Cycle Nursing I	.4
NUR	104	Life Cycle Nursing I Practicum	.4
NUR	201	Life Cycle Nursing II	.5
NUR	202	Life Cycle Nursing II Practicum	.5
NUR	203	Life Cycle Nursing III	.5
NUR	204	Life Cycle Nursing III Practicum	.5
NUR	205	Issues in Nursing	.2

Following is curriculum for the LPN seeking to advance to the associate level in nursing:

TECHNICAL CORE (38 Credits)

NUR	105	NLN Mobility Profile I, Book 1	.5
NUR	106	Transition to Associate Degree Nursing	.5
NUR	107	Transition to Associate Degree Nursing Practicum	.3
NUR	199	Comprehensive Competency Skill Review	.3
NUR	201	Life Cycle Nursing II	.5
NUR	202	Life Cycle Nursing II Practicum	.5
NUR	203	Life Cycle Nursing III	.5
NUR	204	Life Cycle Nursing III Practicum	.5
NUR	205	Issues in Nursing	.2
Total Credits			.66

Child Development

The Child Development Program focuses on early childhood growth and development, including adult-child relationships. Emphasis is placed on the development of skills and techniques for providing appropriate environments and care for young children. Instruction is provided in the physical, emotional, social, and cognitive areas of early childhood. The training is appropriate for candidates seeking the Child Development Associate (CDA) credential. The student develops competencies through classroom instruction, observation, and participation in early childhood settings.

Ivy Tech State College--Central Indiana has an on-campus Child Development Center to meet the need of adult students, College staff and faculty, and locally employed parents and guardians. This licensed center provides on-site training opportunities for practicum students in the Child Development and other Health and Human Services programs. This model facility is licensed to serve 60 children, ages 2 to 12, from 6:30 a.m. to 6:00 p.m., Monday through Friday. The center is open to visitors interested in either the Child Development Program or the Child Development Center services except during naptime, which is 12:30 to 2:30 p.m. daily. Visitors should check with the Center Manager upon arrival. Employment opportunities include: Day Care, Nursery School, Head Start, Family Day Care, Pediatrics Setting, Nanny Care, and School Child Care.

Associate in Science (AS)--Child Development

GENERAL EDUCATION CORE (24 Credits)

ENG	111	English Composition	3
ENG	112	Exposition and Persuasion	3
MAT	110	Contemporary College Math OR	
MAT	111	Intermediate Algebra	3
PSY	101	Introduction to Psychology	3
SOC	111	Introduction to Sociology	3
BIO	101	Introductory Biology OR	
SCI	111	Physical Science	3
COM	101	Fundamentals of Public Speaking	3
POL	101	Introduction to American Government	3

BROAD TECHNICAL CORE (18 Credits)

CHD 121	Introduction to Early Childhood Profession	3
CHD 122	Child Growth and Development	3
CHD 123	Health, Safety and Nutrition	3
CHD 124	Developmental and Cultural Awareness	3
CHD 209	Families in Transition	3
CHD 221	Emerging Literacy	3

SPECIALTY CORE (12 Credits)

CHD	125	Curriculum in the Creative Arts	3
CHD	128	Practicum I	2
CHD	129	Practicum II	2
CHD	131	Seminar in Guidance Techniques	2
CHD	225	Cognitive Curriculum	3

REGIONALLY CORE (12 Credits)

CHD	206	Early Child Administration	3
CHD	230	Practicum III	4
CHD	231	Seminar II - Issues in E.C.E.	2
CHD	XXX	Regionally Determined	3

TOTAL AS CREDITS	66
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Technical Certificate (TC)--Child Development

GENERAL EDUCATION CORE (6 Credits)

ENG	111	English Composition	3
SOC	111	Intro to Sociology OR	
PSY	101	Intro to Psychology	3

Broad TECHNICAL CORE (24 Credits)

CHD	121	Intro to the Early Childhood Profession	3
CHD	122	Child Growth and Development	3
CHD	123	Health, Safety and Nutrition	3
CHD	124	Developmental and Cultural Awareness	3
CHD	125	Curriculum in the Creative Arts	3
CHD	128	Practicum I	2
CHD	129	Practicum II	2
CHD	131	Seminar in Guidance Techniques	2
CHD	225	Emerging Literacy	3

TOTAL TECHNICAL CERTIFICATE CREDITS			30
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Human Services

The Human Services program offers students the opportunity to become Human Services Generalists or to concentrate in the areas of Substance Abuse, Gerontology, Mental Health, or Criminal Justice.

As a Human Services professional, one reaches out to individuals, to families, and to communities. The Human Services program provides the broad understanding to help others meet their psychological, social, and environmental needs. The Human Services Generalist may find employment in a variety of settings.

Those who study Human Services with a focus on Substance Abuse may find positions in substance abuse centers (residential, detox, and hospitals) as counselors or residents-in-training. (The program is certified by Indiana Counselors Association on Alcohol Abuse, ICAADA.) Those who focus on Gerontology may find jobs in adult day care centers, senior citizens centers and extended care facilities. Those who focus on Criminal Justice may want to work in probation or parole but will need to continue their education. Those who focus in the area of Mental Health may find employment in group homes and community health centers.

Program objectives include training the entry-level worker, providing education and training to upgrade the skills and knowledge of those currently employed, and providing development and enhancement.

The Associate of Applied Science degree requires 62 credits.

Criminal Justice Specialty

Generalist Specialty

Gerontology Specialty

Mental Health Specialty

Substance Abuse

Associate in Applied Science (AAS)--Human Services

GENERAL EDUCATION COURSES (18 Credits)

BIO	101	Introductory Biology OR	
SCI	111	Physical Science	3
COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition	3
MAT	110	Contemporary College Math OR	3
MAT	111	Intermediate Algebra	3
POL	101	Intro to American Government/Politics	3
PSY	101	Introduction to Psychology OR	
SOC	111	Introduction to Sociology	3

TECHNICAL CORE (18 CREDITS)

HMS	101	Introduction to Human Services	3
HMS	102	Helping Relationship Techniques	3
HMS	103	Interviewing and Assessment	3
HMS	205	Behavioral/Reality Techniques	3
HMS	206	Group Process and Skills	3
HMS	207	Program Planning/Policy Issues	3

REGIONAL CORE

GENERALIST SPECIALTY (12 Credits)

CIS	101	Introduction to Microcomputers	3
PSY	201	Lifespan Development	3
HMS	XXX	Electives	3
HMS	XXX	Electives	3

REGIONALLY DETERMINED COURSES (14 Credits)

GERONTOLOGY SPECIALTY (12 Credits)

HMS	108	Psychology of Aging	3
HMS	111	Long-Term Care Activity Director OR	
HMS	114	Social Services In Long-Term Care OR	
HMS	140	Loss and Grief OR	
CIS	101	Introduction to Microcomputers	3
HMS	120	Health and Aging	3
HMS	130	Social Aspects of Aging	3

REGIONALLY DETERMINED COURSES (14 Credits)

CRIMINAL JUSTICE SPECIALTY (12 Credits)

HMS	105	Criminal Justice Systems	3
HMS	107	Juvenile Delinquency	3
HMS	230	Abnormal Psychology	3
HMS	240	Rehab Process: Probation and Parole	3

REGIONALLY DETERMINED COURSES (14 Credits)

MENTAL HEALTH SPECIALTY (12 Credits)

HMS	104	Crises Intervention	3
HMS	220	Legal Aspects	3
HMS	230	Abnormal Psychology	3
PSY	201	Lifespan Development	3

REGIONALLY DETERMINED COURSES (14 Credits)

SUBSTANCE ABUSE SPECIALTY (12 Credits)

HMS	113	Problems of Substance Abuse in Society	3
HMS	208	Treatment Models of Substance Abuse	3
HMS	209	Counseling Issues	3
HMS	210	Codependency	3

REGIONALLY DETERMINED COURSES (14 Credits)

TOTAL AAS CREDITS	62
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Medical Assistant

The graduate of the Medical Assistant Program is a professional multi-skilled health care provider dedicated to assisting in patient care management in ambulatory care settings. The practitioner performs administrative and clinical duties and may manage emergency situations, facilities, and/or personnel. Competence in the field also requires that a Medical Assistant display professionalism, communicate effectively, and provide instruction to patients. A required externship provides valuable on-the-job experience.

The program is accredited by the American Association of Medical Assistants and the Committee on Allied Health Education of the American Medical Association.

Graduates of the Medical Assistant Program will be prepared to take the Certification Examination of the American Association of Medical Assistants (AAMA) and the American Medical Association (AMA) to obtain CMA status that is recognized nationally.

The two-year Associate in Applied Science program requires 63 credits for completion. The Technical Certificate requires 30-48 credits.

Salary range for Medical Assistants is from \$6.00 to \$13.00 per hour depending upon education, experience, and specialty area.

The Medical Assistant Program works in cooperation with private physicians' offices, health maintenance organizations, and Immediate Care Centers to provide clinical and administrative experiences for students.

A one-year part-time limited radiology curriculum is available to medical assistant graduates leading to an opportunity to sit for the IDH Limited General Certificate Examination in radiography.

Passing this exam qualifies the Limited General Technologist to perform general radiography in non-hospital settings. The salary range is \$8.50 to \$11.50 per hour.

Note: Evening classes are available. All but 4-5 classes can be completed in the evening.

Associate in Applied Science (AAS)--Medical Assistant

GENERAL EDUCATION CORE (18 Credits)

ANP	101	Anatomy and Physiology I	.3
ANP	102	Anatomy and Physiology II	.3
COM	102	Interpersonal Communication	.3
ENG	111	English Composition	.3
MAT	XXX	Math Elective	.3
XXX	XXX	Humanities/Social Elective	.3

Broad TECHNICAL CORE (18 Credits)

HHS	101	Medical Terminology	.3
HHS	102	Medical Law and Ethics	.2
MEA	102	First Aid and CPR	.2
MEA	113	Pharmacology	.3
MEA	131	Medical Financial Management	.3
MEA	132	Computer Concepts in the Medical Office	.3
MEA	203	Disease Conditions	.3

MEA 114	M.A. Lab Techniques	3
MEA 115	Medical Insurance	2
MEA 120	M.A. Clinical Extern	3
MEA 121	M.A. Administrative Extern	3
MEA 130	M.A. Administrative	2
MEA 133	Clinical Theory	3
MEA 134	Clinical Skills Lab	2
MEA 135	Medical Word Processing/Transcription	3

MEA	XXX	Administrative Elective	3
MEA	XXX	Clinical Elective	3

TOTAL AAS CREDITS63

Associate in Applied Science (AAS)--Medical Assistant/Pharmacy Technician Specialty

CORE COURSES (21 Credits)

ANP	101	Anatomy and Physiology I	.3
ANP	102	Anatomy and Physiology II	.3
HHS	102	Medical Law and Ethics	.2
MEA	113	Pharmacology	.3
MEA	151	Pharmacy Technician I	.3
MEA	152	Pharmacy Technician II	.3
MEA	153	Pharmacy Technician Adm.	.2
MEA	154	Pharmacy Externship	.2

***TOTAL PHARMACY TECHNICIAN SPECIALTY CREDITS**30

***Total specialty credits (total includes the 6 General Education creits and the 3 Technical Core Credits)**

Occupational Therapy Assistant

Occupational therapy directs an individual's participation in selected tasks to restore, reinforce and enhance performance, facilitate learning of those skills and functions essential for adaption and productivity, diminish or correct pathology, and promote and maintain health. An occupational therapy assistant provides service to individuals whose abilities to cope with living tasks have been threatened or impaired by developmental deficits, the aging process, physical injury or illness, or psychological disability. The profession serves a diverse population in a variety of settings such as hospitals and clinics, rehabilitation facilities, long-term care facilities, extended care facilities, sheltered workshops, schools and camps, private homes and community agencies.

A two-year program requiring 76 credits leads to an Associate in Science degree.

Associate in Science (AS)--Occupational Therapy Assistant

GENERAL EDUCATION CORE (31Credits)

ENG	111	English Composition	3
PSY	101	Introduction to Psychology	3
ANP	201	Advanced Human Physiology	4
PSY	201	Lifespan Development	3
ANP	101	Anatomy and Physiology I	3
MAT	111	Intermediate Algebra	3
		or	
MAT	110	Contemporary Math	3
COM	101	Fundamentals of Public Speaking	3
ANP	102	Anatomy and Physiology II	3
HMS	230	Abnormal Psychology	3
SOC	111	Introduction to Sociology	3

TECHNICAL CORE (26 Credits)

OTA 101	Foundations of Occupational Therapy	3
OTA 102	Kinesiology	2
OTA 103	Medical Conditions in Occupational Therapy	3
OTA 202	Therapeutic Activities	3
OTA 203	Therapeutic Group Activities	3
OTA 204	Psychiatric Conditions in Occupational Therapy	3
OTA 205	COTA in Physical Health	3
OTA 208	COTA in Interactive Model	3
OTA 210	COTA in Mental Health	3

SPECIALTY CORE COURSES (19 Credits)

OTA 201	Field Work 1-A1
OTA 206	Assistive Technology and Adaptive Equipment2
OTA 207	Daily Living Skills3
OTA 209	Field Work 1-B1
OTA 211	Clinical Transition and Management4
OTA 212	Field Work 2-A4
OTA 213	Fieldwork Work 2-B4

TOTAL AS CREDITS	76
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Practical Nursing

The Licensed Practical Nurse is an integral part of the health care team. The Practical Nursing program is a one-year course of study leading to a Technical Certificate. This accredited program prepares the individual to take the state licensure exam to become a Licensed Practical Nurse (LPN). The program is designed for students to gain knowledge and technical skills necessary to appropriately care for patients in a variety of health care settings, such as hospitals, convalescent centers, and physicians' offices. Students learn to administer medications and treatments commonly performed by Licensed Practical Nurses.

The Indianapolis program is accredited by the National League of Nursing (NLN) and approved by the Indiana State Board of Nursing. Clinical courses begin in the fall and spring semester of this twelve-month program that requires two semesters and a twelve-week summer session. The PSB Aptitude Test Practical Nursing is required after Skills Advancement courses (reading, writing, and math) are completed or almost completed. The fee for this test is \$25.00. Applicants are advised to apply six to nine months in advance.

The following facilities have collaborated with the College as clinical sites for practical work experiences required in the program:

- Community North, South and East in Indianapolis
- Hancock Memorial Hospital, Greenfield
- Riley Hospital for Children
- Regency Place - Greenwood
- Americana Healthcare North
- Eagle Valley Manor
- Churchman Manor
- Cambridge Healthcare
- Carmel Care
- Johnson Memorial Hospital, Franklin
- Lifelines of Indianapolis
- Major Hospital, Shelbyville
- Methodist Hospital of Indiana
- Winona Hospital
- Wishard Memorial Hospital
- St. Vincent's Hospital and Health Care Center

The starting salary is \$10.00 to \$13.00 per hour, which can increase up to 25% because of shift differentials and fringe benefits. Applicants should check with local medical facilities to get current salary information.

Technical Certificate (TC)--Practical Nursing

GENERAL EDUCATION CORE (6 Credits)

ANP	101	Anatomy and Physiology I3
ANP	102	Anatomy and Physiology II3

TECHNICAL CORE (45 Credits)

PNU	101	Foundations of Nursing4
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PNU	102	Therapeutic Measures	3
PNU	103	Holistic Approach to Health	2
PNU	104	Nutrition	2
PNU	105	Introduction to Clinical Nursing	3
PNU	107	Cardiopulmonary Nursing	3
PNU	108	Endocrine/Genitourinary Nursing	3
PNU	109	Gastrointestinal/Sensorimotor Nursing	3
PNU	110	Introduction to Pharmacology for PN	2
PNU	111	Pharmacology for Practical Nurses	2
PNU	112	Medical/Surgical Clinical Nursing I	3
PNU	113	Medical/Surgical Clinical Nursing II	2
PNU	114	Nursing Issues and Trends	1
PNU	115	Gerontology	3
PNU	116	Geriatric Clinical Nursing	3
PNU	117	Maternal/Child Nursing	3
PNU	118	Maternal/Child Clinical Nursing	3

TOTAL TECHNICAL CERTIFICATE CREDITS50

Suggested courses that help develop students for Program Required Courses:

BSA	007	Spelling	1
BSA	065	Introduction to Life Sciences	3
BSA	074	Introduction to Computer Literacy	2
HHS	101	Medical Terminology	3
MEA	212	Phlebotomy	3
BSA	070	Success Skills for Human Services and Health Technologies	3

Radiologic Technology

The radiologic technologist prepares patients for X-rays; positions them; determines the proper voltage, current and exposure time; and operates the equipment. Trained radiologic technologists are in demand in hospitals, medical laboratories, physicians' and dentists' offices and clinics, federal and state health agencies and certain educational institutions.

The program includes courses in the following areas—radiologic technique, exposure, positioning, protection, radiation physics, radiation biology, and ethics. Clinical practice and supplemental instruction are provided in accredited hospitals. Upon completion of program requirements, graduates are eligible to take the American Registry Examination given by the American Registry of Radiologic Technologists.

During the last four academic periods, 93% of the program graduates passed the American Registry of Radiologic Technologist Examination on their first attempt.

Radiologic Technology is a full-time year round, two-year program. Students, once accepted, will be at their clinical site three days each week and in the classroom two days each week.

The clinical sites are Bloomington Hospital in Bloomington, Johnson Memorial in Franklin, and Winona Hospital in Indianapolis.

The starting salary for a Radiologic Technologist is \$11 to \$11.50 per hour. This rates does not include the fringe benefits that could increase the base pay as much as 25%.

The program is accredited by the Joint Review Committee on Education in Radiologic Technology.

The Radiologic Technology Program faculty offers a one-year part-time series of courses or curriculum called Limited General Radiography. These courses were developed by faculty of the two-year Associate Degree program in Radiologic Technology at the request of the Indiana Department of Health (IDH). This series of nine courses totaling 30 credits in Limited General Radiography is the only group of appropriate courses approved by the IDH in Indiana for individuals who work in non-hospital settings. These courses are open to Registered Nurses, Licensed Practical Nurses, Certified Medical Assistants and Medical Assistants who were trained on the job. Qualified individuals interested in this course series must be employed at a facility that is operating an IDH approved X-ray machine. The starting pay for students who successfully complete the course series ranges from \$8.50 to \$11.50 per hour.

Associate in Applied Science (AAS)--Radiologic Technology

GENERAL EDUCATION CORE (18 Credits)

*ANP	101	Anatomy and Physiology I	3
*ANP	102	Anatomy and Physiology II	3
COM	101	Fundamentals of Public Speaking	3
*ENG	111	English Composition	3
*MAT	111	Intermediate Algebra	3
PSY	101	Introduction to Psychology OR	
*SOC	101	Introduction to Sociology	3
*Regionally Determined Courses			

TECHNICAL CORE (63 Credits)

*CIS	101	Introduction to Microcomputers	3
*HHS	102	Medical Law and Ethics	2
*HHS	101	Medical Terminology	3
RAD	288	Pharmacology	3
RAD	101	Orientation to X-ray Nursing	3
RAD	102	Principles of Radiographic Exposures I	2
RAD	103	Radiographical Positioning I	3
RAD	104	X-Ray Clinical I	4

RAD	105	Radiographical Positioning II	3
RAD	106	X-Ray Clinical II	4
RAD	107	Radiation Physics	3
RAD	109	Imaging Techniques and Equipment	2
RAD	201	Radiographical Positioning III	2
RAD	202	X-Ray Clinical III	4
RAD	203	X-Ray Clinical IV	4
RAD	204	X-Ray Clinical V	4
RAD	205	Pathology for Radiographic Technology	2
RAD	206	Radiobiology and Radiologic Technologists	3
RAD	207	Radiographical Positioning IV	3
RAD	208	Principles of Radiographic Exposures II and Quality Assurance	2
RAD	298	Pharmacology for Radiographers	3
RAD	299	General Exam Review	3

REGIONALLY DETERMINED COURSES (3 CREDITS)

*CHM	101	Chemistry	3
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TOTAL AAS CREDITS	84
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Respiratory Care Technology

A respiratory care practitioner is an allied health professional who works under the direction of physicians in the diagnosis, evaluation, treatment, education and care of patients with cardiopulmonary diseases or abnormalities.

A graduate of the Associate of Applied Science program will be eligible to sit for the Entry Level and Advanced Practitioner exams given by the National Board for Respiratory Care (NBRC). Successful exam candidates will be awarded the Registered Respiratory Therapist credential. The program's pass rates for the national exam are far above the national averages.

The two-year Associate of Applied Science degree requires 79 credits for completion.

The Associate Degree program is offered on both a full and part-time track. Both tracks require set courses each semester for the duration of the program. Students are accepted into either the full-time program or the part-time program. The full-time program is five semesters in length (18 credits each semester) and starts in the spring semester of each year. The part-time program is nine semesters in length (9 credit hours per semester) and starts in the fall semester each year. Students may start their General Education courses any semester. Students should contact program personnel for specific curriculum and admission information.

Facilities that have collaborated with the college in this program include: Bloomington Hospital, Columbus Regional Hospital, Community Hospital-East, Hendricks County Hospital, Indiana University Medical Center, Methodist Hospital, Riley Hospital for Children, St. Francis Hospital, St. Vincent Hospital, Veteran's Administration Hospital, Winona Hospital and Wishard Hospital.

The 1990 hourly salary range for graduates of this program is from \$9.50 to \$11.50 at the Associate Degree level.

Associate in Applied Science (AAS)--Respiratory Care Technology

GENERAL EDUCATION (24 Credits)

ANP	101	Anatomy & Physiology I	.3
ANP	102	Anatomy & Physiology II	.3
BIO	111	Microbiology	.3
CHM	101	Chemistry I	.3
ENG	104	Technical Writing	.3
ENG	111	English Composition	.3
MAT	111	Intermediate Algebra	.3
PSY	101	Intro to Psychology	.3

TECHNICAL CORE (55 Credits)

MEA	113	Pharmacology	.3
RES	288	Information Systems for Healthcare (Computer)	.1
RES	101	Respiratory Care Science I	.3
RES	102	Respiratory Care Science II	.3
RES	103	Respiratory Care Science III	.3
RES	104	Critical Care I	.3
RES	105	Cardiopulmonary Physiology	.3
RES	106	Clinical Medicine I	.3
RES	108	Clinical Practicum 1	.3
RES	109	Clinical Practicum 2	.3
RES	110	Clinical Practicum 3	.3
RES	111	Clinical Practicum 4	.3
RES	112	Clinical Practicum 5	.3
RES	205	Clinical Practicum 6	.3
RES	206	Clinical Practicum 7	.3

Surgical Technology

The surgical technologist is a highly-skilled member of the surgical team, qualified by didactic and clinical education to provide safe and efficient care to the patient in the operating room. The didactic education consists of courses in Anatomy and Physiology, Microbiology, Pharmacology, Medical Law and Ethics, Surgical Techniques and Surgical Procedures. Closely supervised clinical education is provided in local area hospitals.

The surgical technologist actively participates in surgery by performing scrub and/or circulating duties which include: passing instruments and supplies to the surgical team members, preparing and positioning the patient, operating equipment, assisting the anesthesiologist, and keeping accurate records. Many students complete their General Education courses prior to the clinical. The program is two calendar years in length requiring 67 credits leading to an Associate in Applied Science Degree.

The program is accredited by the Committee on Allied Health Education and Accreditation with the Joint Review Committee on Education for Surgical Technologists. The full-time program begins in the fall semester each year and includes the spring semester and a twelve-week summer session. The General Education courses can be started any semester. Graduates receive an Associate in Applied Science Degree.

The following facilities have collaborated with the College as clinical sites for practical work experiences required in the program.

Indiana University Hospital

Riley Hospital for Children

Community East Hospital

Wishard Memorial Hospital

St. Vincent's Hospital and Health Care Center

The starting salary is \$9.00 to \$10.50 per hour, which can increase up to 25% because of shift differentials.

Associate in Applied Science (AAS)--Surgical Care Technology

GENERAL EDUCATION CORE (21 Credits)

ANP	101	Anatomy & Physiology I	3
ANP	102	Anatomy & Physiology II	3
BIO	111	Microbiology	3
COM	102	Intro to Interpersonal Communication	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra OR	
MAT	110	Contemporary College Mathematics	3
PSY	101	Intro to Psychology OR	
SOC	111	Intro to Sociology	3

TECHNICAL CORE (38 Credits)

SUR	101	Surgical Techniques	3
SUR	102	Surgical Procedures 1	3
SUR	103	Fundamentals of Surgical Technology	6
SUR	104	Surgical Procedures 2	6
SUR	105	Clinical Applications 1	9
SUR	106	Surgical Procedures 3	3
SUR	107	Clinical Applications 2	8

BROAD CORE COURSES (8 Credits)

HHS	101	Medical Terminology	3
HHS	102	Medical Law/Ethics	2
MEA	113	Pharmacology	3

TOTAL AAS CREDITS67

Suggested courses that help develop students for required courses. These courses are not required and they do not count toward the program.

BSA	007	Spelling	1
BSA	065	Introduction to Lifespans	3
BSA	071	Critical Thinking	3
BSA	101	Introduction to Computer Literacy	1
MEA	288	Success Skills for Human Services and Health Technologies	3

Business

Accounting TechnologyAAS, AS

Administrative Office TechnologyAAS, AS, TC

Business AdministrationAAS

Human Resources

Management

Marketing

Quality Management

Logistics Management

Supervision

Computer Information SystemsAAS

Programming

Microcomputer

Hospitality AdministrationAAS

Culinary Arts

Hotel/Restaurant Administration

Baking and Pastry

Institutional Food Management

Paralegal TechnologyAAS

AAS- Associate in Applied Science

AS- Associate in Science

TC- Technical Certificate

Accounting Technology

The Accounting Program develops an understanding of accounting principles, business law, communications, business equipment and related areas of study in the field. Instruction is offered in computerized accounting systems. Technical skills in financial accounting, cost accounting and tax preparation are emphasized.

Accounting duties typically include maintaining journals and ledgers, processing banking transactions, billing, preparing payroll, maintaining inventory records, purchasing, processing expense reports, preparing financial statements and analyzing managerial reports. Position titles may include junior or staff accountant, junior auditor, cost accounting clerk, bookkeeper, payroll clerk, inventory clerk, accounts receivable clerk and financial management trainee.

A two-year program requiring 60 credits leads to an Associate in Applied Science degree and an Associate in Science degree. Technical certificates and career development certificates also are available.

Associate in Science (AAS)--Accounting Technology

GENERAL EDUCATION CORE (24 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Fundamentals of Economics	3
ENG	111	English Composition	3
ENG	112	Exposition and Persuasion	3
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
SOC	111	Introduction to Sociology	3
HUM	101	Survey of Humanities	3

TECHNICAL CORE (18 Credits)

ACC	101	Accounting Principles I	3
ACC	102	Accounting Principles II	3
BUS	101	Introduction to Business	3
BUS	102	Business Law	3
CIS	101	Introduction to Microcomputers	3
CIS	115	Electronic Spreadsheets in Business	3

SPECIALTY CORE (15 Credits)

ACC	105	Income Tax I	3
ACC	201	Intermediate Accounting I	3
ACC	202	Intermediate Accounting II	3
ACC	203	Cost Accounting I	3
ACC	209	Auditing	3

REGIONALLY DETERMINED AS ELECTIVE CORE (3 Credits)

TOTAL CREDITS 60

Associate in Applied Science (AS)--Accounting Technology

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Fundamentals of Economics	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)

ACC	101	Accounting Principles I	3
ACC	102	Accounting Principles II	3
BUS	101	Introduction to Business	3
BUS	102	Business Law	3
CIS	101	Introduction to Microcomputers	3
CIS	115	Electronic Spreadsheets in Business	3

SPECIALTY CORE (12 Credits)

ACC	105	Income Tax I	3
ACC	201	Intermediate Accounting I	3
ACC	202	Intermediate Accounting II	3
ACC	203	Cost Accounting I	3

REGIONALLY DETERMINED CORE (12 Credits)

TOTAL CREDITS 60

Administrative Office Technology

The Administrative Office Technology Program prepares students for an automated office environment. Students develop basic office skills and acquire computer skills, including word processing, spreadsheets, data bases and microcomputer operating systems. Several applications (advanced word processing, desktop publishing and integrated packages) also can be studied in depth.

The Administrative Office Technology Program is designed to accommodate students with different levels of training experiences. Courses are offered which provide initial, advanced and refresher education and assist individuals in achieving professional recognition and career progression. The program prepares graduates as administrative office personnel and provides opportunities for specialized training in such areas as legal, medical and office automation. Students who complete the recommended sequence of courses are eligible to take the Administrative/Information Processing Specialist (AIPS) or the Certified Professional Secretary (CPS) exams administered by the Institute for Certifying Secretaries of the Professional Secretaries International Association (PSI).

A two-year program requiring 60 credits leads to an Associate in Applied Science degree and an Associate in Science degree. Technical certificates and career development certificates also are available. An associate in science degree is available at selected campuses.

Associate in Applied Science (AAS)--Administrative Office

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Fundamentals of Economics	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Social Sciences Elective	3

TECHNICAL CORE (18 Credits)

ACC	101	Accounting Principles I	3
AOT	103	Information/Word Processing Concepts	3
AOT	119	Document Production	3
AOT	219	Specialized Formatting/Transcription	3
BUS	101	Introduction to Business	3
CIS	101	Introduction to Microcomputers	3

SPECIALTY CORE (12 Credits)

AOT	116	Business Communications	3
AOT	202	Information/Word Processing Applications	3
AOT	220	Document Management	3
AOT	221	Office Management/Procedures	3

REGIONALLY DETERMINED CORE (12 Credits)

TOTAL CREDITS			60
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Technical Certificate (TC)--Administrative Office Technology

GENERAL EDUCATION CORE (6 Credits)

COM	102	Introduction to Interpersonal Communication	3
OR			
ENG	111	English Composition	3
XXX	XXX	Social Sciences Elective	3

TECHNICAL CORE (3 Credits)

AOT	119	Document Production	3
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SPECIALTY CORE (6 Credits)

AOT	103	Information/Word Processing Concepts	3
CIS	101	Introduction to Microcomputers	3

REGIONALLY DETERMINED CORE (15 Credits)

TOTAL CREDITS 30

Associate in Applied Science (AAS)--Administrative Office Technology /Legal Specialty

(Effective Fall 1995)

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Fundamentals of Economics	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics	3
SOC	XXX	Social Science Elective	3
SCI	XXX	Life/Physical Science	3

TECHNICAL CORE (36 Credits)

ACC	101	Accounting Principles	3
AOT	103	Information/Word Processing Concepts	3
AOT	116	Business Communications	3
AOT	119	Document Production	3
AOT	215	Legal Terminology	3
AOT	219	Specialized Formatting and Transcription	3
AOT	221	Office Management and Procedures	3
BUS	101	Introduction to Business	3
CIS	101	Introduction to Microcomputers	3
CIS	115	Electronic Spreadsheets in Business	3
LEG	101	Introduction to Paralegal Studies	3
LEG	103	Legal Procedures	3

REGIONALLY DETERMINED CORE ELECTIVES (6 Credits)

AOT	212	Microcomputer Word Processing	3
AOT	214	Desktop Publishing	3
BUS	102	Business Law	3
CIS	106	Micro Operating Systems	3
LEG	109	Family Law	3
LEG	111	Criminal Law	3
LEG	202	Litigation	3

TOTAL CREDITS 60

Technical Certificate (TC)--Secretarial Administrative

GENERAL EDUCATION CORE (6 Credits)

ENG	111	English Composition	3
XXX	XXX	Social Sciences Elective	3

TECHNICAL CORE (24 Credits)

AOT	103	Information/Word Processing Concepts	3
AOT	116	Business Communications	3
AOT	119	Document Production	3
AOT	219	Specialized Formatting and Transcription	3
AOT	220	Document Management	3
AOT	221	Office Management and Procedures	3
CIS	101	Introduction to Microcomputers	3
XXX	XXX	Elective	3

REGIONALLY DETERMINED CORE (3 Credits)

TOTAL CREDITS	30
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Technical Certificate (TC)--Medical Secretary

GENERAL EDUCATION CORE (6 Credits)

ENG	111	English Composition	3
XXX	XXX	Social Sciences Elective	3

TECHNICAL CORE (24 Credits)

AOT	103	Information/Word Processing Concepts	3
AOT	113	Office Calculating Machines	1
HEA	111	Medical Typing and Transcription	3
AOT	220	Document Management	3
AOT	221	Office Management and Procedures	3
CIS	101	Introduction to Microcomputers	3
HHS	101	Medical Terminology	3
MEA	201	Medical Transcription and Word Processing	2
XXX	XXX	Elective	3

TOTAL CREDITS	30
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Associate in Science (AAS)--Administrative Office Technology

GENERAL EDUCATION CORE (24 Credits)

COM	101	Fundamentals of Public Speaking	3
COM	102	Introduction to Interpersonal Communications	3
ECN	101	Fundamentals of Economics	3
ENG	111	English Composition	3
HUM	111	Survey of Humanities	3
MAT	111	Intermediate Algebra	3
XXX	XXX	Social Science Elective	3
XXX	XXX	Life/Physical Science	3

TECHNICAL CORE (36 Credits)

ACC	101	Accounting Principles	3
AOT	102	Accounting Principles II	3
AOT	103	Information/Word Processing Concepts	3
AOT	116	Business Communications	3
AOT	119	Document Production	3
AOT	220	FDocument Management	3
AOT	221	Office Management and Procedures	3
BUS	101	Introduction to Business	3
BUS	102	Business Law	3
CIS	101	Introduction to Microcomputers	3
CIS	115	Electronic Spreadsheets in Business	3
XXX	XXX	Elective	3

TOTAL CREDITS60

Business Administration

The Business Administration Program gives students the broad background they need for general administrative positions in a variety of business environments. It also provides an opportunity for specialization. A student in the Business Administration Program may specialize in one of the following areas: logistics management, management, marketing, quality management or supervision.

A two-year program requiring 60 credits leads to an Associate in Applied Science degree. Technical certificates and career development certificates also are available.

Associate in Applied Science (AAS)--Business Administration/ Human Resources Specialty

(Effective Fall 1995)

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	XXX	Economics Elective	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Humanities/Social Sciences Elective	3

TECHNICAL CORE (18 Credits)

ACC	101	Accounting Principles I	3
BUS	101	Introduction to Business	3
BUS	102	Business Law	3
BUS	105	Principles of Management	3
CIS	101	Introduction to Microcomputers	3
MKT	101	Principles of Marketing	3

SPECIALTY CORE (12 Credits)

XXX	XXX	Overview of Human Resources	3
XXX	XXX	Employee Relations	3
XXX	XXX	Ethics and Labor Relations	3
XXX	XXX	Compensation Administration	3
XXX	XXX	Benefits Administration	3
XXX	XXX	Organizational Behavior	3
XXX	XXX	Legal Issues	3
XXX	XXX	Interviewing, Coaching and Counseling Skills	3
XXX	XXX	Staffing and Rightsizing	3
XXX	XXX	Development of Affirmative Action Plan	3
XXX	XXX	Current Issues: Chemical Dependency, TQM, Outsourcing	3

REGIONALLY DETERMINED CORE (12 Credits)

TOTAL CREDITS60

**Associate in Applied Science (AAS)--Business Administration/Management Specialty
(Effective Fall 1995)**

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	XXX	Economics Elective	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Humanities/Social Sciences Elective	3

TECHNICAL CORE (18 Credits)

ACC	101	Accounting Principles I	3
BUS	101	Introduction to Business	3
BUS	102	Business Law	3
BUS	105	Principles of Management	3
CIS	101	Introduction to Microcomputers	3
MKT	101	Principles of Marketing	3

SPECIALTY CORE (12 Credits)

BUS	202	Human Resource Management	3
BUS	204	Case Problems in Management	3
BUS	208	Organizational Behavior	3
BUS	210	Managerial Finance	3

REGIONALLY DETERMINED CORE (12 Credits)

TOTAL CREDITS60

**Associate in Applied Science (AAS)--Business Administration/Marketing Specialty
(Effective Fall 1995)**

GENERAL EDUCATION CORE (18 Credits)			
COM	101	Fundamentals of Public Speaking	3
ECN	XXX	Economics Elective	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Humanities/Social Sciences Elective	3

TECHNICAL CORE (18 Credits)			
ACC	101	Accounting Principles I	3
BUS	101	Introduction to Business	3
BUS	102	Business Law	3
BUS	105	Principles of Management	3
CIS	101	Introduction to Microcomputers	3
MKT	101	Principles of Marketing	3

SPECIALTY CORE (12 Credits)			
MKT	102	Principles of Selling	3
MKT	104	Advertising	3
MKT	202	Logistics/Purchasing Control	3
MKT	220	Principles of Retailing	3

REGIONALLY DETERMINED CORE (12 Credits)			
TOTAL CREDITS			60

**Associate in Applied Science (AAS)--Business Administration/ Quality Management Specialty
(Effective Fall 1995)**

GENERAL EDUCATION CORE (18 Credits)			
COM	101	Fundamentals of Public Speaking	3
ECN	XXX	Economics Elective	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)			
ACC	101	Accounting Principles I	3
BUS	101	Introduction to Business	3
BUS	102	Business Law	3
BUS	105	Principles of Management	3
CIS	101	Introduction to Microcomputers	3
MKT	101	Principles of Marketing	3

SPECIALTY CORE (12 Credits)			
SPC	101	Statistical Process Control	3
SPC	107	Quality Control Concepts and Techniques II	3
SUP	101	Quality Control Concepts and Techniques I	3
SUP	223	Total Quality Management	3

REGIONALLY DETERMINED CORE (12 Credits)

TOTAL CREDITS			60
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Associate in Applied Science (AAS)--Business Administration/Logistics Management Specialty

(Effective Fall 1995)

GENERAL EDUCATION CORE (18 Credits)		
COM	101	Fundamentals of Public Speaking3
ECN	XXX	Economics Elective3
ENG	111	English Composition3
MAT	110	Contemporary College Mathematics OR
MAT	111	Intermediate Algebra3
XXX	XXX	Life/Physical Sciences Elective3
XXX	XXX	Humanities/Social Sciences Elective3
TECHNICAL CORE (18 Credits)		
ACC	101	Accounting Principles I3
BUS	101	Introduction to Business3
BUS	102	Business Law3
BUS	105	Principles of Management3
CIS	101	Introduction to Microcomputers3
MKT	101	Principles of Marketing3
SPECIALTY CORE (12 Credits)		
LOG	101	Introduction to Materials Management3
LOG	201	Transportation Systems3
MKT	202	Logistics/Purchasing Control3
LOG	202	Physical Distribution3
REGIONALLY DETERMINED CORE (12 Credits)		
TOTAL CREDITS		60

Associate in Applied Science (AAS)--Business Administration/Supervision Specialty

(Effective Fall 1995)

GENERAL EDUCATION CORE (18 Credits)			
COM	101	Fundamentals of Public Speaking	3
ECN	XXX	Economics Elective	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Humanities/Social Sciences Elective	3
TECHNICAL CORE (18 Credits)			
ACC	101	Accounting Principles 1	3
BUS	101	Introduction to Business	3
BUS	102	Business Law	3
BUS	105	Principles of Management	3
CIS	101	Introduction to Microcomputers	3
MKT	101	Principles of Marketing	3
SPECIALTY CORE (12 Credits)			
BUS	202	Human Resource Management	3
SUP	102	Techniques of Supervision	3
SUP	223	Total Quality Management	3
SUP	224	Operations Management	3
REGIONALLY DETERMINED CORE (12 Credits)			
TOTAL CREDITS			60

Computer Information Systems

The Computer Information Systems curriculum, with specialties in computer programming and microcomputer operations, is designed to provide the flexible and comprehensive training required by employers. The curriculum includes technical courses in computer information systems and related areas, general education and regionally determined technical courses in each specialty area. Instruction includes both theoretical concepts and practical applications needed to produce graduates able to function in positions of responsibility.

Automated systems allow for the integration of several functionally related applications such as word processing, database management, spreadsheets, programming, electronic mail systems, graphics generation and telecommunications. These systems may be stand-alone, shared logic, distributed or integrated. Demand for employees with computer and business skills is particularly high in small- and medium-sized firms which create, transmit and control information by using computer technology as a management tool.

A two-year program requiring 60 credits leads to an Associate in Applied Science degree. Technical certificates and career development certificates also are available. An associate in science degree is available at selected campuses.

Associate in Applied Science (AAS)--Computer Information Systems/Microcomputer Specialty (Effective Fall 1995)

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Economics Fundamentals	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Humanities/Social Sciences Elective	3

TECHNICAL CORE (18 Credits)

ACC	101	Accounting Principles I	3
BUS	101	Introduction to Business	3
CIS	101	Introduction to Microcomputers	3
CIS	102	Data Processing Fundamentals	3
CIS	113	Logic, Design, and Programming	3
CIS	203	Systems Analysis and Design	3

SPECIALTY CORE (12 Credits)

CIS	106	Microcomputer Operating Systems	3
CIS	115	Electronic Spreadsheets in Business	3
CIS	202	Data Communications	3
CIS	224	Hardware and Software Troubleshooting	3

REGIONALLY DETERMINED CORE (12 Credits)

TOTAL CREDITS	60
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Associate in Applied Science (AAS)--Computer Information Systems/Programming Specialty

(Effective Fall 1995)

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Economics Fundamentals	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
XXX	XXX	Life/Physical Sciences Elective	3
XXX	XXX	Humanities/Social Sciences	3

TECHNICAL CORE (18 Credits)

ACC	101	Accounting Principles I	3
BUS	101	Introduction to Business	3
CIS	101	Introduction to Microcomputers	3
CIS	102	Data Processing Fundamentals	3
CIS	113	Logic, Design, and Programming	3
CIS	203	Systems Analysis and Design	3

SPECIALTY CORE (12 Credits)

CIS	104	Introduction to COBOL Programming	3
CIS	106	Microcomputer Operating Systems	3
CIS	201	Database Design and Management	3
CIS	202	Data Communications	3

REGIONALLY DETERMINED CORE (12 Credits)

TOTAL CREDITS60

Hospitality Administration

The Hospitality Administration Program emphasizes the techniques of such hospitality leaders as Ritz, Escoffier, Statler, Hilton and Marriott. By choosing a specialty area, students begin building leadership skills for the profession of welcoming and serving guests. The hospitality programs offered by Ivy Tech produce graduates who can perform well in the hospitality industry.

Specialties are available in baking and pastry arts, catering, culinary arts, food service (technical certificate only) and hotel and restaurant administration. A two-year program requiring 60-66 credits leads to an Associate in Applied Science degree. Technical certificates and career development certificates are also available.

Associate in Applied Science (AAS)—Hospitality Administration/Baking and Pastry Arts Specialty

(Effective Fall 1995)

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Economics Fundamentals	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Intermediate Algebra	3
PSY	101	Introduction to Psychology	3
SOC	111	Introduction to Sociology	3
Humanities/Social Sciences			3

TECHNICAL CORE (18 Credits)

HOS	101	Sanitation and First Aid	3
HOS	102	Basic Foods Theory and Skills	3
HOS	104	Nutrition	3
HOS	109	Hospitality Purchasing	2
HOS	201	Hospitality Organization and Human Resource Management	3
HOS	203	Menu, Design, and Layout	2
HOS	204	Food and Beverage Cost Control	2

SPECIALTY CORE (29 Credits)

BKR	101	Yeast Raised Breads and Rolls	3
BKR	102	Plasticized and Sweet Doughs	3
BKR	103	Internship	3
BKR	201	Cakes, Icings, and Fillings	3
BKR	202	Classical Cake Decoration	3
BKR	204	Externship	3
HOS	103	Soups, Stocks, and Sauces	2
HOS	105	Introduction to Baking	3
HOS	106	Pantry and Breakfast	3
HOS	207	Classical Pastries and Chocolates	3

TOTAL CREDITS65

Associate in Applied Science (AAS)--Hospitality Administration/Culinary Arts Specialty

(Effective Fall 1995)

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Economics Fundamentals	3
ENG	111	English Composition	3
MAT	110	Contemporary College Mathematics OR	
MAT	111	Algebra	3
PSY	101	Introduction to Psychology	3
SOC	111	Introduction to Sociology	3

TECHNICAL CORE (18 Credits)

HOS	101	Sanitation and First Aid	3
HOS	102	Basic Foods Theory and Skills	3
HOS	104	Nutrition	3
HOS	109	Hospitality Purchasing	2
HOS	201	Hospitality Organization and Human Resource Management	3
HOS	203	Menu, Design, and Layout	2
HOS	204	Food and Beverage Cost Control	2

SPECIALTY CORE (30 Credits)

CUL	110	Meat Cutting	2
CUL	206	Externship/Internship	3
CUL	207	Classical Cuisines	3
CUL	212	Fish and Seafood	2
HOS	103	Soups, Stocks, and Sauces	2
HOS	105	Introduction to Baking	3
HOS	106	Pantry and Breakfast	3
HOS	108	Table Service	3
HOS	202	Garde Manger	3
CUL	204	Classical Pastries	3
CUL	107	Hospitality Computer	3

TOTAL CREDITS 66

Career Certificate--Hospitality Administration/Institutional Food Management

TECHNICAL CORE (24 Credits)

HOS	101	Sanitation and First Aid	3
HOS	102	Basic Foods Theory and Skills	3
HOS	104	Nutrition	3
HOS	109	Hospitality Purchasing	2
HOS	114	Hospitality Organization and Administration	3
HOS	201	Hospitality Organization and Human Resource Management	3
HRM	215	Therapeutic Nutrition	3
HRM	203	Practicum-IFM	3
HRM	288	Spreadsheets for Foodservice Operators	1

TOTAL CREDITS 24

**Associate in Applied Science (AAS)--Hospitality Administration/
Hotel and Restaurant Administration Specialty**

GENERAL EDUCATION CORE (18 Credits)

COM	101	Fundamentals of Public Speaking	3
ECN	101	Economics Fundamentals	3
ENG	111	English Composition	3
MAT	111	Intermediate Algebra	3
SOC	111	Physical Science	3
PSY	101	Introduction to Psychology	3

TECHNICAL CORE (18 Credits)

HOS	101	Sanitation and First Aid	3
HOS	102	Basic Foods Theory and Skills	3
HOS	104	Nutrition	3
HOS	109	Hospitality Purchasing	2
HOS	201	Hospitality Organization and Human Resource Management	3
HOS	203	Menu, Design, and Layout	2
HOS	204	Food and Beverage Cost Control	2

SPECIALTY CORE (30 Credits)

ACC	101	Accounting Principles I	3
HOS	107	Hospitality Computer Systems	3
HOS	108	Table Service	3
HOS	114	Hospitality Organization and Administration	3
HOS	205	Food and Beverage Cost Control Application	1
HOS	214	Hospitality Law and Security	3
HOS	216	Hospitality Marketing and Group Sales	3
HRM	201	Food and Beverage Management	2
HRM	202	Front Office	3
HRM	203	Practicum	3
HRM	206	Housekeeping	3

TOTAL CREDITS	66
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Paralegal Technology

Recognizing the demand for trained paralegals, Ivy Tech has shaped a curriculum with input from attorneys and other professionals associated with the legal field. These advisors offer Ivy Tech the opportunity to establish the qualifications necessary for success in the paralegal field.

Ivy Tech's program provides knowledgeable paralegal professionals ready for an exciting career. The duties of trained paralegals can range from research and writing to interviewing and investigations. As examples, paralegals can be found performing legal research, drafting legal correspondence and legal pleadings, interviewing clients and witnesses, or managing trial documents and exhibits.

Ivy Tech training provides students with the wide variety of skills necessary to succeed in this career. The curriculum emphasizes written and oral communication skills and provides in-class opportunities for technical skill development. Courses are taught by attorneys who are selected based upon their experience in the subject matter, as well as their familiarity with the function of paralegals as part of the legal team.

A two-year program requiring 60 credits leads to an Associate in Applied Science degree. The Paralegal Program is offered in Indianapolis.

Associate in Applied Science (AAS)—Paralegal Technology

GENERAL EDUCATION CORE (18 Credits)

ANP	101	Anatomy and Physiology	3
COM	101	Fundamentals of Public Speaking	3
ENG	111	English Composition: Strategies for Inquiry	3
ENG	112	Exposition and Persuasion	3
MAT	110	Contemporary College Mathematics	3
MAT	111	Intermediate Algebra	3
XXX	XXX	Humanities/Social Science	3

TECHNICAL CORE (18 Credits)

ACC	101	Accounting Principles I	3
BUS	101	Introduction to Business	3
CIS	101	Introduction to Microcomputers	3
LEG	101	Introduction to Paralegal Studies	3
LEG	102	Legal Research and Writing	3
LEG	103	Civil Procedures	3

SPECIALTY CORE (12 Credits)

LEG	106	Claims Investigation	3
LEG	202	Litigation	3
LEG	203	Law Office Management and Technology	3
LEG	204	Advanced Legal Writing	3

REGIONALLY DETERMINED CORE (12 Credits)

TOTAL CREDITS	60
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General Education and Support Services

The mission of General Education and Support Services Division, through a strong General Education Program, is to stimulate the full intellectual, emotional, and social development of each student. General education also undergirds, broadens, and augments the college's technical curriculum. Recognizing its essential value, all associate degree programs require a minimum of 25% of degree credits in general education. The division also provides a comprehensive skills advancement program, known as ACCESS, which develops basic skills, attitudes and learning processes to assure success in college programs. Additionally, the division provides an integrated system of academic and counseling support services as well as a Learning Resource Center with the latest research materials and resources.

General Education

An associate degree must prepare students to enter the work force and become full participants in the complex, rapidly evolving multiple environments of American society. The General Education Program provides instruction in mathematics, physical science, communication, and social science, as well as a learning support system of counseling and tutoring, and additional support services.

Mathematics and Science

Mathematics is an essential skill in meeting the ever-changing needs of our increasingly complex society.

The study of science leads to an understanding of the basic principles of the physical and life processes in our natural world.

The mathematics and sciences program provides program-level mathematics and science courses, including Contemporary Mathematics, Intermediate Algebra, Geometry/Trigonometry, Algebra/Trigonometry, Calculus, Statistics, Finite Math, Physical Science, Technical Physics, Physics, Chemistry, Biology, Microbiology, Anatomy and Physiology, and Advanced Physiology.

Communication and Social Sciences

Recognizing that language is the foundation for all learning, the communications program encourages the use of language as a creative tool to develop and organize an understanding of self and others. Individuals develop proficiency in process-oriented English Composition, Exposition and Persuasion, Technical Writing, Fundamentals of Public Speaking, and Introduction to Interpersonal Communications.

The study of social science explores the commonality and diversity of human experience in a pluralistic society. Courses are offered in psychology, sociology, political science, and economics.

Learning Resource Center/Library

The Learning Resource Center/Library is a source of general reference materials such as magazines and newspapers, and of specific reference materials such as journals and books for all areas of the College. Also available are career exploration materials, audio-visual software and equipment, inter-library loans, textbooks on reserve, library assistance and pay photocopying. Hours are 8:00 a.m. to 9:00 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 4:30 p.m. Summer hours may vary.

Skills Advancement ACCESS Program

Developing basic skills, attitudes and learning processes in order that students may enter and be successful in college programs, the ACCESS program is a comprehensive system of services including initial assessment of skills, specialized counseling services, ongoing course placement and classroom and lab instruction in basic reading, writing, mathematics, science and study skills. Additional learning assistance is provided through small-group and one-on-one tutoring and computer-assisted instruction. The ACCESS program also provides comprehensive services for special needs students and English as a Second Language courses for non-native speakers of English.

Student Academic Support Services

Expert one-on-one tutoring for any course offered by ACCESS or General Education is available in the Math/Science Tutoring Center in room 258 and Reading/Writing Tutoring Center in Room 252A. The hours are Monday through Thursday 8:15 a.m. to 8:30 p.m., closed 3:30 p.m. to 4:30 p.m. and Friday 8:00 a.m. to 12 noon.

The Computer-Assisted Instruction (CAI) and Interactive Video Disk (IVI) Lab in Room 252A and Macintosh Lab in Room 252B are two microcomputer labs that help students learn concepts and provide students with adequate drill and practice sessions in such areas as the following: reading, writing, grammar, mathematics and science skills, English as a Second Language and study skills. Also available are GED, preparation materials, technical vocabulary for the deaf program, word processing application, and a wide range of instructional software. Hours are Monday through Thursday, 8:00 a.m. to 8:30 p.m., and Friday, 8:00 a.m. to 12:00 noon and 1:00 to 3:00 p.m., and Saturday, 9:30 a.m. to 4:00 p.m.

Also available is a Testing Lab that can be used by the entire College. When a student misses a test for a legitimate reason, the instructor can leave that test in the Testing Lab, and the student can take it when it is convenient. The student must have a permission slip from the instructor.

Special Services

Testing for course placement and admission to Ivy Tech programs is provided free of charge. Included in this session are assessments of reading, writing, science, and mathematics ability. Students who wish to receive credit by testing out of a course should contact the Testing Center for procedures.

Counseling services through the ACCESS program include academic counseling, career assessment and counseling, and personal development counseling. These services are available to students who need supplemental support in order to succeed in their coursework.

The Special Needs Program at Ivy Tech is available to serve any student with a documented disability that may emerge as a barrier to the successful completion of coursework. Academic support and counseling services are provided specifically for students with special needs to enhance their independence and career preparation.

Basic Skills Advancement Courses

Skills Advancement

BSA 007	Spelling	1
BSA 024	Introduction to College Writing I	3
BSA 025	Introduction to College Writing II	3
BSA 031	Reading Strategies for College I	3
BSA 032	Reading Strategies for College II	3
BSA 044	Mathematics	3
BSA 050	Introductory Algebra	3
BSA 061	Introduction to Chemistry	3
BSA 065	Introduction to Life Sciences	3
BSA 070	College Study Principles	3
BSA 074	Introduction to Computer Literacy	1
BSA 081	Keyboarding I	1
BSA 082	Keyboarding II	2
BSA 083	Keyboarding III	3
BSA 288	ESL Reading V	3
BSA 288	ESL Listening and Speaking V	3
BSA 288	ESL Grammar V	3
BSA 288	ESL Reading VI	3
BSA 288	ESL Listening and Speaking VI	3
BSA 288	ESL Grammar VI	3

Basic Skills Advancement

Course Descriptions

BSA 007 Spelling

1 Credit

Develops spelling skills by thorough practice in spelling with attention to rules and exceptions.

BSA 024 Introduction to English I

3 Credits

Introduces the student to a process approach to writing with emphasis on student generated topics and multiple drafting.

BSA 025 Introduction to English II

3 Credits

Furtheres skills gained in BSA 024 with emphasis on preparing students for English 101 by helping students expand their control of the writing process.

BSA 031 Reading I

3 Credits

Emphasizes comprehension, vocabulary, and word attack skills beginning at a basic level.

BSA 032 Reading II

3 Credits

Advances skills acquired in BSA 031 - comprehension, vocabulary, and word attack and further prepares students for program-level courses.

- BSA 044 Mathematics**
3 Credits
 Reviews instruction in basic computational skills and their applications.
- BSA 050 Introductory Algebra**
3 Credits
 Concentrates on basic algebra skills in preparation for intermediate algebra.
- BSA 061 Introduction to Chemistry**
3 Credits
 Introduces basic principles of chemistry and technical vocabulary.
- BSA 065 Introduction to Anatomy and Physiology**
3 Credits
 Studies the basics of the human body as an integrated unit.
- BSA 070 College Study Principles**
3 Credits
 Orients and motivates students for success in college. Develops the skills of textbook-reading, note-taking, and test-taking.
- BSA 074 Introduction to Computer Literacy**
3 Credit
 Introduces basic computer literacy skills development.
- BSA 081 Introduction to Keyboarding I**
1 Credit
 Deals with basic keyboarding skills applicable to a typewriter or computer.
- BSA 082 Introduction to Keyboarding II**
1 Credit
 Deals with keyboarding skills applicable to a typewriter or computer.
- BSA 083 Introduction to Keyboarding III**
2 Credit
 Deals with basic keyboarding skills applicable to a typewriter or computer.
- BSA 288 ESL Reading V**
3 Credits
 Emphasizes intensive reading analysis of prose; studies vocabulary in context; develops reading strategies; teaches critical reading skills.
- BSA 288 ESL Reading VI**
3 Credits
 Stresses advanced comprehension skills using academic subject areas; focuses on vocabulary expansion, reading interpretation, and critical thinking.
- BSA 288 ESL Listening and Speaking V**
3 Credits
 Focuses on listening strategies for understanding natural speech patterns; provides conversational practice with emphasis on American cultural values and behavior; use of idioms.
- BSA 288 ESL Listening and Speaking VI**
3 Credits
 Focuses on efficient methods of listening to lectures and conversation; stresses vocabulary development; emphasizes conversation about academic and social topics using appropriate idioms.

BSA 288 ESL Grammar V
3 Credits

Focuses on the study of complex sentence structure, understanding the relationship between ideas, and the expression of ideas in conditional sentences.

BSA 288 ESL Grammar VI
3 Credits

Focuses on advanced grammatical concepts through contextualized dialogue; examines formal and informal grammatical style.

General Education

Course Descriptions

Communications

COM 101	Fundamentals of Public Speaking	3
COM 102	Introduction to Interpersonal Communications	3

Composition

ENG 111	English Composition: Strategies for Inquiry	3
ENG 112	Exposition and Persuasion	3
ENG 211	Technical Writing	3

Economics

ECN 101	Economic Fundamentals	3
ECN 201	Principles of Macroeconomics	3
ECN 202	Principles of Microeconomics	3

History

HSY 101	Survey of American History I	3
HSY 102	Survey of American History II	3

Political Science

POL 101	Intro. to American Government and Politics	3
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Psychology

PSY 101	Introduction to Psychology	3
PSY 201	Lifespan Development	3

Sociology

SOC 111	Introduction to Sociology	3
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Humanities

ETH 101	Introduction to Ethics	3
PHL 101	Introduction to Philosophy	3
HUM 101	Survey of Humanities	3

Mathematics

MAT 110	Contemporary College Mathematics	3
MAT 111	Intermediate Algebra	3
MAT 115	Statistics	3
MAT 121	Geometry/Trigonometry	3
MAT 131	Algebra/Trigonometry I	3

MAT 132	Algebra/Trigonometry II	3
MAT 135	Finite Math	3
MAT 201	Brief Calculus	3

Life and Physical Sciences

ANP 101	Anatomy & Physiology I	3
ANP 102	Anatomy & Physiology II	3
ANP 201	Advanced Physiology	4
BIO 101	Biology	3
BIO 111	Microbiology	3
CHM 101	Chemistry I	3
CHM 102	Chemistry II	3
PHY 101	Physics I	4
PHY 102	Physics II	4
PHY 110	Technical Physics	4
SCI 111	Physical Science	3

Communications

COM 101 Fundamentals of Public Speaking

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or completion of BSA coursework in reading and writing.

Focuses on the process of interpersonal communications as a dynamic and complex system of interactions. The course will stress the importance of understanding and applying interpersonal communication theory in work, family, and social relationships.

COM 102 Introduction to Interpersonal Communication

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or completion of BSA coursework in reading and writing.

Focuses on the process of interpersonal communications as a dynamic and complex system of interactions. The course will stress the importance of understanding and applying interpersonal communication theory in work, family, and social relationships.

Composition

ENG 111 English Composition: Strategies for Inquiry

3 Credits

Prerequisite: Demonstrated competency in writing skill through appropriate assessment or successful completion of BSA writing coursework.

Provides a foundation in rhetorical principles, communication strategies, and inquiry processes that can be successfully applied in writing situations: personal, academic, or professional. The composing process will be initiated by and integrated with critical reading and thinking.

ENG 112 Exposition and Persuasion

3 Credits

Prerequisite: ENG 111.

Continues the strategies taught in ENG 111 and emphasizes research-based analytic and persuasive writing. Students will complete collaborative and individual projects.

ENG 211 Technical Writing

3 Credits

Prerequisite: ENG 111

Builds on the writing skills taught in ENG 111. Students will demonstrate their ability to prepare technical reports for various purposes using standard research techniques, documentation and formatting as appropriate. Also, a variety of business correspondence will be written. Students will demonstrate both written and oral competencies.

Economics

ECN 101 Economic Fundamentals

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework.

Provides an introduction to the fundamentals of economics and their application to current economic problems.

ECN 201 Principles of Macroeconomics

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or BS coursework and MAT 111 - Intermediate Algebra.

Develops a conceptual understanding of the forces affecting the level of national income, employment, interest rates, and prices.

ECN 202 Principles of Microeconomics

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework and MAT 111. Develops an understanding of the process by which the market price mechanism allocates resources and influences individual behavior.

History

HSY 101 Survey of American History

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or completion of BSA coursework in reading and writing.

Covers major themes and events in American history from the discovery era to the Civil War and Reconstruction.

HSY 102 Survey of American History II

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or completion of BSA coursework in reading and writing.

Covers major themes and events in American history from the Civil War and Reconstruction to the present.

Political Science

POL 101 Introduction to American Government and Politics

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework.

Introduces the foundations, nature, and dynamics of American government and politics including constitutional foundations, civil liberties and civil rights, Federalism, political parties, public opinion, interest groups, media, nominations, campaigns, elections, the Presidency, the Judiciary, Congress, bureaucracies, and public policy.

Psychology

PSY 101 Introduction to Psychology

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework.

Provides a general survey of the science of psychology. Includes the study of research methodology, emotion, biological foundations, learning and cognition, perception, development, personality, abnormal psychology, and social psychology.

PSY 201 Lifespan Developments

3 Credits

Prerequisite: Completion and grade of C or better in PSY 101 or SOC 111.

Covers human development from conception to death, focusing on self as well as others: discussion about time before adolescence and adult years. In addition, relevant research for each period will be covered.

Sociology

SOC 111 Introduction to Psychology

3 Credits

Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework.

Introduces the students to the science of human society, including fundamental concepts, descriptions, and analysis of society, culture, the socialization process, social institutions, and social change.

Humanities

ETH 101 Introduction to Ethics

3 Credits

Prerequisite: Demonstrated competency in writing and reading skills through appropriate assessment or successful completion of BSA program coursework.

Examines some major theories of ethics and their application to moral problems and issues.

PHL 101 Introduction to Philosophy

3 Credits

Prerequisite: ENG 111 and demonstrated competency in reading and writing skills through appropriate assessment or successful completion of BSA program coursework.

Examines some of the fundamental questions of philosophy such as the foundations of morality, skepticism and knowledge, the nature of mind, free will and determinism, and the existence of God.

HUM 101 Survey of Humanities

3 Credits

Prerequisite: Demonstrated competency in reading and writing skills through appropriate assessment or successful completion of BSA program coursework.

Familiarizes students with the interrelated disciplines within the humanities: literature, fine arts, history, music, architecture, and philosophy.

Mathematics

MAT 110 Contemporary Mathematics

3 Credits

Prerequisite: BSA 055 or demonstrated competency.

Presents mathematical concepts of numeration, algebra, geometry, probability and statistics through a problem-solving and modeling approach. The student will recognize, validate and communicate these concepts.

MAT 111 Intermediate Algebra

3 Credits

Prerequisite: BSA 050 or demonstrated competency.

Presents in-depth study of the fundamental concepts and operations of algebra including real numbers, roots, linear equations and inequalities, graphing, systems of equations, polynomials, factoring, scientific notation, introduction of logarithms, rational expressions, quadratic equations, and English and metric conversion.

MAT 115 Statistics

3 Credits

Prerequisite: MAT 111

Provides study in interpretation and presentation of descriptive and inferential statistics. Includes measures of central tendency, probability, binomial and normal distributions, hypothesis testing of one and two sample populations, confidence intervals, chi-square testing, correlation, data description and graphical representation.

MAT 121 Geometry and Trigonometry
3 Credits

Prerequisite: MAT 111

Provides study in geometry and trigonometry including polygons, similarity, solid geometry, properties of circles, constructions, right triangles, angle measurements in radians and degrees, trigonometric functions and their applications to right triangles, Pythagorean Theorem, laws of sine and cosine, graphing of trigonometric functions, trigonometric identities and coordinate conversions.

MAT 131 Algebra and Trigonometry I
3 Credits

Prerequisite: MAT 111 or demonstrated competency.

Provides study in algebra including functions, exponential rules, linear equations, radicals, vectors, right triangle trigonometry, oblique triangles, graphs of sine and cosine functions and variation.

MAT 132 Algebra and Trigonometry II
3 Credits

Prerequisite: MAT 131

Continues Algebra-Trigonometry I providing study of systems of equations, vectors, graphs of trigonometric functions, trigonometric equations, complex numbers, exponential and logarithmic functions, and conics.

MAT 135 Finite Math
3 Credits

Prerequisite: MAT 111 or demonstrated competency.

Surveys solving and graphing linear equations and inequalities, elementary set theory, matrices and their applications, linear programming and elementary probability.

MAT 201 Brief Calculus
3 Credits

Prerequisite: MAT 132 108

109

Provides an introductory study of the fundamental concepts and operations of calculus, including functions, limits, continuity, derivatives, point of inflection, first derivative test, concavity, second derivative test, optimization, antiderivatives, integration by substitution and parts and applications of a definite integral.

Life and Physical Sciences

ANP 101 Anatomy and Physiology I
3 credits (2 lecture, 2 lab)

Prerequisite: Demonstrated competency through assessment or BSA coursework.

Develops a comprehensive understanding of the close interrelationship between anatomy and physiology as seen in the human organism. It begins by introducing the student to the cell which is the basic structural and functional unit of all organisms and covers tissues, integument, skeleton, muscular and nervous systems as an integrated unit.

ANP 102 Anatomy and Physiology II
3 credits (2 lecture, 2 lab)

Prerequisite: ANP 101

Continues the study of the interrelationships of the systems of the body, covering digestion, respiratory, blood, lymphatic articulation, excretion, hormone secretion, and reproduction. A brief overview of human growth and development as well as heredity is presented.

ANP 201 Advanced Physiology

4 credits (3 lecture, 2 lab)

Prerequisite: ANP 102, CHM 101

Studies of human physiology for students entering health oriented fields. Emphasis will be on the study of the function of the nervous, muscular, circulatory, respiratory, urinary, digestive and endocrine systems and their homeostatic mechanisms and system interaction. Laboratory exercises focus on clinically relevant measurement of human function.

BIO 101 Introductory Biology

3 credits (2 lecture, 2 lab)

Prerequisite: Demonstrated competency through assessment or BSA coursework.

Provides an introduction to the basic concepts of life. The course includes discussion of cellular and organismal biology, genetics, evolution, ecology and interaction among all living organisms. Applications of biology to society are addressed.

BIO 111 General Biology

3 credits (2 lecture, 2 lab)

Prerequisite: Demonstrated competency through assessment or BSA coursework.

Presents an overview of microbiology which includes fundamentals, methods and materials, an introduction to industrial and clinical microbiology and special topics.

CHM 101 Chemistry I

3 credits (2 lecture, 2 lab)

Prerequisite: Demonstrated competency through assessment or BSA coursework.

Studies the science of chemistry and measurement, atomic theory and the periodic table, chemical bonding, stoichiometry and gases.

CHM 102 Chemistry II

3 credit (2 lecture, 2 lab)

Prerequisite: CHM 101

Includes liquids and solids, solutions and solution concentrations, acids and bases, equilibrium, nuclear chemistry, organic and biochemistry.

PHY 101 Physics I

4 credits (3 lecture, 2 lab)

Prerequisite: MAT 121 or 131

Studies the basic concepts of mechanics, including force and torque, linear and rotational motion, work, energy and power, simple machines and fluids.

PHY 102 Physics II

4 credits (3 lecture, 2 lab)

Prerequisite: PHY 101

Provides the study of physics of heat, light, periodic and wave motion, electricity and magnetism and concepts of modern and current physics.

PHY 110 Technical Physics

4 credits (3 lecture, 2 lab)

Prerequisite: MAT 111

Introduces the concepts and applications of physics. The organizations of this course is non-traditional in that it leads the student to develop an integrated understanding of the theory and applications of measuring (or unit) systems, scalars, vectors, force, work, rates, energy, momentum, power, force transformers, simple machines, vibrations, and waves, and time constants.

SCI 111 Physical Science

3 credits (2 lecture, 2 lab)

Prerequisite: Demonstrated competency through assessment or BSA coursework.

Studies physical concepts and theories pertaining to current applications and trends in physics, chemistry, earth science and astronomy. Emphasis is on concepts and factual knowledge.

Course Descriptions

ABR 101 Body Repair Fundamentals

3 Credits

Examines the characteristics of body metals and includes the installation of moldings, ornaments and fasteners with emphasis on sheet metal analysis and safety.

ABR 103 Auto Paint Fundamentals

3 Credits

Introduces auto paint considerations with emphasis on the handling of materials and equipment in modern automotive technologies.

ABR 104 Collision Damage Analysis and Repair

3 Credits

Provides instruction in analyzing extensive body damage and determining the tools and procedures needed to replace panels.

ABR 105 Conventional Frame Diagnosis and Correction

3 Credits

Covers the use of tools, frame machines and equipment for frame and chassis repair. Includes study of terms pertaining to front suspension and rear axle. Describes uses of frame gauges, tram gauges and other measuring devices.

ABR 106 Body Repair Applications

3 Credits

Introduces fundamentals of using hand and power tools in the repair of minor collision damage, with emphasis on safety.

ABR 107 Automotive Painting Technology

3 Credits

Provides instruction in the total refinishing of an automobile with emphasis on advanced and specialty painting techniques.

ABR 108 Unibody Structural Analysis and Repair

3 Credits

Covers unibody repair, identification and analysis of damage, measuring and fixturing systems, straightening systems and techniques, mechanical component service and knowledge of suspension and steering systems on front-wheel-drive unibody vehicles.

ABR 120 Fiberglass Plastic Repair

3 Credits

Introduces types of fiberglass and plastic materials used in auto body repair. Covers both interior and exterior applications.

ACC 101 Accounting Principles 1

3 Credits

Introduces the fundamental principles, techniques and tools of accounting. Presents the mechanics of the accounting cycle including collecting, recording, summarizing, analyzing and reporting information pertaining to service and mercantile enterprises. Covers internal control, deferred charges, notes and interest, valuation of receivables, payrolls, inventories and plant assets.

ACC 102 Accounting Principles 2

3 Credits

Continues the study of accounting to include partnership and corporate accounting systems. Covers preparation and analysis of financial statements and long-term liabilities and investments. Introduces cost, managerial, branch and departmental accounting techniques.

ACC 105 Income Tax 1**3 Credits**

Offers an overview of federal and state income tax law for individuals including taxable income, capital gains and losses, adjustments, standard and itemized deductions, tax credits and appropriate tax forms. Introduces tax concepts needed by a sole proprietorship.

ACC 106 Payroll Accounting**3 Credits**

Covers payroll calculating and reporting including various federal and state withholding taxes, employer payroll taxes, typical insurance and other arrangements affecting the preparation of payroll registers and employees' earnings records. Includes computerized payroll.

ACC 107 Accounting for Recordkeeping**3 Credits**

Provides instruction for non-accounting majors, with special emphasis on the trade professions. Covers the cash basis of recordkeeping for materials, payroll, depreciation and financial statements. Introduces the operation of petty cash funds, basic cash budgeting and controlling cash through the use of a checkbook. Covers financial ratios, construction accounting methods and computing customer estimates.

ACC 108 Career Essentials of Accounting**3 Credits**

Introduces the basic principles of accounting as utilized in a variety of office settings. Includes the principles of debit and credit, double-entry bookkeeping, use of journals and transaction analysis. Covers uses of ledgers, posting procedures, petty cash, banking procedures, payroll, depreciation, work sheets, balance sheets and income statements.

ACC 109 Personal Finance**3 Credits**

Examines the process of setting and achieving financial goals. Emphasizes managing financial resources, budgeting for current expenses, projecting cash flow and managing short- and long-term credit. Includes use of insurance to reduce risks and vehicles for saving and investing.

ACC 111 Accounting Principles Lab 1**1 Credit**

Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an Accounting Principles 1 course. Introduces the touch-method of numeric input on a calculator and includes computerized problems.

ACC 112 Accounting Principles Lab 2**1 Credit**

Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Accounting Principles 2 course. Uses computerized problems.

ACC 113 Income Tax Lab**1 Credit**

Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Income Tax 1 course. Uses computerized problems.

ACC 114 Payroll Accounting Lab**1 Credit**

Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Payroll Accounting course. Uses computerized problems.

ACC 118 Financial Concepts for Accounting

3 Credits

Develops math skills needed in the business field and serves as a basis for course work in business. Includes the study of business applications using rational numbers, algebraic equations, time value of money concepts and basic statistics.

ACC 201 Intermediate Accounting 1

3 Credits

Studies accounting principles and applications at an intermediate level pertaining to the income statement and balance sheet, cash and short-term investments, receivables, inventories, plant assets and intangible assets. Includes analysis of bad debts, inventory valuation, repairs and maintenance, depreciation of plant assets and present value applications.

ACC 202 Intermediate Accounting 2

3 Credits

Continues studies of Intermediate Accounting 1 and includes long-term investments, current and contingent liabilities, long-term debt, stockholders' equity, special accounting problems and analysis, statement of cash flows and financial statement analysis. Includes capital and treasury stock transactions, dividends, earnings per share, accounting for income taxes, correction of errors and creation of financial statements from incomplete records.

ACC 203 Cost Accounting 1

3 Credits

Examines the manufacturing process in relation to the accumulation of specific costs of manufactured products. Studies various cost accounting report forms, material, labor control and allocation of manufacturing costs to jobs and departments.

ACC 204 Cost Accounting 2

3 Credits

Continues Cost Accounting 1. Studies the master or comprehensive budget, flexible budgeting and capital budgeting. Emphasizes tools for decision making and analysis. Introduces human resource accounting.

ACC 205 Seminar in Accounting

1 Credit

Allows accounting students an opportunity to pursue specific areas of interest at a more advanced level in accounting.

ACC 206 Managerial Accounting

3 Credits

Provides an understanding of accounting records and management decision making, with topics including internal accounting records and quantitative business analysis.

ACC 207 Accounting for Government and Nonprofit

3 Credits

Emphasizes the similarities and differences between government, nonprofit and commercial accounting methods and procedures. Exposes students to the basic fund accounting cycle for the general fund and other special funds.

ACC 208 Income Tax 2

3 Credits

Continues Income Tax 1. Studies procedures and problems pertaining to federal and state income tax laws for partnerships and corporations. Includes a review and in-depth study of concepts related to proprietorships covered in Income Tax 1.

ACC 209 Auditing

3 Credits

Covers public accounting organization and operation including internal control, internal and external auditing, verification and testing of the balance sheet and operating accounts, and the auditor's report of opinion of the financial statements.

3 Credits

ACC 213 Electronic Spreadsheets in Business

3 Credits**ACC 214 Consumer and Commercial Credit**

3 Credits

ACC 215 Credit Procedures and Collections**3 Credits**

ACC 216 Credit Management

3 Credits

ACC 217 Intermediate Accounting Lab 1

1 Credit

ACC 218 Intermediate Accounting Lab 2

1 Credit

ACC 219 Cost Accounting Lab

1 Credit

ACC 220 Special Applications Lab 1

1 Credit

ACC 221 Special Applications Lab 2

1 Credit

115



ACC 222 Accounting Software Applications**2 Credits**

Solves accounting problems using software similar to what is currently used in business. Includes installation, operation and analysis of an accounting software package.

ACC 223 Advanced Topics in Accounting**2 Credits**

Discusses topics of current interest in accounting. Focuses on special interest projects for students in accounting. Includes trips, guest speakers, audio-visual activities and seminars.

ACC 224 Construction Bidding**3 Credits**

Examines bidding procedures, contract documents, contracts, bonds and insurance. Describes materials and installation procedures and how they may affect the bid. Covers the unit of measure of the work, estimating the quantity of materials and the relationship of the specifications.

ACC 225 Integrated Accounting Software**3 Credits**

Integrated accounting software package(s) will be used to illustrate computerized accounting practices. The general ledger will be integrated with accounts receivable, accounts payable and other accounting.

ACC 281-293 Special Topics in Accounting Technology**1-5 Credits**

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

AFS 101 Fire Technology**3 Credits**

Examines the history of firefighting, identifies the types of apparatus and fire protection systems and analyzes the fire problem in general. Provides a basis for the chemical and hazardous properties of combustion and the related by-products.

AFS 102 Fire Apparatus and Equipment**3 Credits**

Examines in detail the types of apparatus in use today. Studies pumpers, aerials, elevating platforms and special apparatus. Utilizes National Fire Protection Association standards in identifying the proper responses for a given situation. Includes study of apparatus placement on an emergency incident, types of pumps, tests, equipment, drafting, relay, nozzles, fittings and hose lays and maintenance on various types of apparatus.

AFS 103 Firefighting Strategy and Tactics**3 Credits**

Prepares the student to make responsible decisions concerning fireground strategies and tactics at the company level. Uses various priority scenarios, including preparing for incident command and commanding the initial response. Emphasizes company operations with basic command decisions.

AFS 104 Building Construction Fire Service**3 Credits**

Examines the design principles involved in the protection of a structure from fire involvement. Studies the signs, symptoms and indicators of partial or total building collapse during firefighting operations. Includes the study of legislative codes and laws concerning building design, building fire safety, classification of building construction and blueprint reading.

AFS 105 Fire/Arson Investigation**3 Credits**

Focuses on the responsibilities of the firefighter, the investigator and the department in fire scene investigations, fire cause and loss, collection and preservation of evidence, and determination of fire origin. Emphasizes the application and assistance of various scientific aids that assist in the investigation.

AFS 108 Fire Prevention/Inspection**3 Credits**

Examines the function of the fire inspector and the organization of the fire prevention unit. Emphasizes identifying codes and regulations utilized by the inspector, with particular use of the Indiana Fire Code. Includes the legal authority of fire prevention principles, application of the fire code and sound management principles as applied to a bureau.

AFS 109 Fire Department Specifications**3 Credits**

Surveys specifications of firefighting apparatus, equipment, protective clothing, facilities, and all other sources of materials necessary to a fire department. Study includes the writing of Standard Operating Guides (SOGs) and blueprint readings.

AFS 201 Fire Protection Systems**3 Credits**

Provides a general introduction to fire alarm monitoring devices and extinguishing systems. Develops a strong base for fire protection or commercial applications. Covers fire extinguishing agents, portable fire extinguishers, carbon dioxide systems, dry chemical systems, halogenated systems/foam systems, explosive suppression systems, thermal/smoke/flame detection systems and building monitoring systems. Covers standpipe and sprinkler systems.

AFS 202 Fire Service Management**3 Credits**

Studies the principles and functions of administrative and management personnel in the fire service. Topics discussed include departmental organizations, administrative and management procedures, personnel selection, line and staff functions, communications, the fire company unit, public relations and current problems in administration.

AFS 204 Fire Service Hydraulics**3 Credits**

Studies compressible fluids including fluid properties, principles of fluid statics, flow system principles, pipe friction and head loss, flow measurements, pumps and other appliances and hydraulic devices. Relates applications to fire protection, water supply and foam systems.

AFS 205 Aircraft Firefighting**3 Credits**

Examines the hazards associated with aircraft firefighting. Includes lecture and practical use of airport firefighting equipment, extinguishing agents, strategy and tactics, rescue methods and aircraft design and construction.

AFS 206 Shipboard Firefighting**3 Credits**

Focuses on firefighting strategy and tactics for land-based fire department personnel and equipment. Includes a survey of equipment, hook-ups, procedures, incident command, use of foam and support systems on ships.

AFS 262 Firefighter 2nd Class**3 Credits**

Certifies firefighters for state certification as a second class firefighter.

AFS 263 Firefighter 1st/2nd Class**3 Credits**

Completes certification at the second class level and begins first class instruction.

AMT 102 Introduction to Robotics**3 Credits**

Introduces students to robotics and automated systems and their operating characteristics. Covers robotics principles of operation and work envelopes. Teaches coordinate systems and how hydraulic, pneumatic and electromechanical systems function together as a system. Covers servo and non-servo controls, system capabilities and limitations and safety. Investigates robot tooling, including welders, grippers, magnetic pickups, vacuum pickups, compliance devices, adhesive applicators and paint sprayers.

AMT 201 Manufacturing Systems Control**3 Credits**

Introduces the field of industrial controls. Teaches principles of control systems and how they are applied to a production system to achieve automation. Systems included in the course are stepper motors, programmable logic controllers, microprocessors, computers and feedback systems. Emphasizes programmable logic controllers and the local area network.

AMT 202 Work Cell Design and Integration**3 Credits**

Studies principles pertaining to design and implementation of robots in industrial work cells. Emphasizes selection of the best work site and robot system, application of cell sensor, development of cycle times, economic analysis, safety considerations, proposal preparation and human resources development.

AMT 203 Automation Electronics**3 Credits**

Demonstrates the operation and application of electronic devices in the automation field. Includes linear integrated circuits, sensors and interfacing systems, actuators and drive controls and process control techniques.

AMT 205 Automated Manufacturing Systems**3 Credits**

Provides instruction in selecting equipment, writing specifications, designing fixtures and interconnects, integrating systems, providing interfaces and making the assigned systems operational to produce "marketable" products.

AMT 240 Introduction to Computer Integrated Manufacturing**3 Credits**

Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Includes project planning which will be formally documented and presented by students.

AMT 241 Computer-Integrated Manufacturing Project**3 Credits**

Continues the study of the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of the project planned in AMT 240 in a realistic CIM environment.

AMV 100 Introduction to Transportation**3 Credits**

Introduces students to the work environment of a transportation repair facility. Presents historical and future trends with emphasis in career/placement requirements. Safety, OSHA, EPA, and environmental standards are presented. Introduction to the eight areas of ASE technician certification and related tools are presented.

AMV 100 Ford Introduction to Transportation**3 Credits**

Introduces students to the work environment of a transportation repair facility. Presents historical and future trends with emphasis in career/placement requirements. Safety, OSHA, EPA, and environmental standards are presented. Introduction to the eight areas of ASE technician certification and related tools are presented.

AMV 100 GM Introduction to Transportation**3 Credits**

Introduces students to the work environment of a transportation repair facility. Presents historical and future trends with emphasis in career/placement requirements. Safety, OSHA, EPA, and environmental standards are presented. Introduction to the eight areas of ASE technician certification and related tools are presented.

AMV 101 T-Ten Chassis and Suspension**3 Credits**

This course is a study of various frame designs and suspension systems used in modern Toyota vehicles. Repair and replacement of steering linkages and chassis components, both front and rear systems are included.

AMV 101 Ford STST Suspension and Steering**3 Credits**

This course is a study of various frame designs and suspension systems used in Ford vehicles. Repair and replacement of steering linkages and chassis components, both front and rear are included. Course also includes study of Air Suspension, Active Suspension, Level Ride, Electronic Variable power steering systems and related computers.

AMV 101 GM STG Suspension and Steering**3 Credits**

This course is a study of various frame designs and suspension systems used in GM vehicles. Repair and replacement of steering linkages and chassis components, both front and rear are included. Course also includes study of Level Ride, Electronic Variable power steering systems and related computers.

AMV 107 Ford Engine Principles and Design**3 Credits**

Examines engine dynamics, theory of engine operation and design characteristics of all engine assemblies and subassemblies. Emphasizes removal, tear down, visual inspection, precision measuring inspection, clean up of components and parts and rebuilding engines according to industry standards.

AMV 107 GM Engine Principles and Design**3 Credits**

Examines engine dynamics, theory of engine operation and design characteristics of all engine assemblies and subassemblies. Emphasizes removal, tear down, visual inspection, precision measuring inspection, clean up of components and parts and rebuilding engines according to industry standards.

AMV 113 Basic Electricity STST Certification**3 Credits**

Introduction to electrical theory and Ford automotive circuits and components.. Electron theory, electrical circuits, electronic circuits, terms and wiring diagrams are emphasized. Students also will be introduced to electrical and electronic circuits and components testing.

AMV 113 GM STG Specialized Electronics Training**3 Credits**

The course is an introduction to electrical theory and General Motors automotive circuits and components. Electron theory, electrical circuits, electronic circuits, terms and wiring diagrams are emphasized. Students also will be introduced to electrical and electronic circuits and components testing.

AMV 113 Toyota Electrical Circuits

3 Credits

Introduces fundamentals of electricity and electrical behavior as applied to modern transportation. Includes extensive use of digital multimeters and circuit troubleshooting. Presents an intensive study of the construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

AMV 202 Computer Engine Controls

3 Credits

Examines computerized ignition, carburetor, fuel injection and sensors for engine controls on late model passenger cars. Covers theory, diagnostic procedure and repair procedure of the CCC, MCU, EEC-IV, lean burn and other spark control systems.

AOT 103 Information/Word Processing Concepts

3 Credits

Introduces the concept of information/word processing systems. Offers hands-on experience in the operation of word processing systems.

AOT 105 General Office Procedures

3 Credits

Emphasizes procedures and the changing responsibilities for the entry-level secretary/receptionist in today's offices. Identifies the skills and attitudes needed to succeed in the business environment.

AOT 106 Refresher Shorthand

1 Credit

Provides instruction in a lab setting to bring shorthand skills to an employable level.

AOT 107 Refresher Typewriting

1 Credit

Provides instruction in a lab setting to bring typing skills to an employable level. Concentrates on four areas of skill development: speed and accuracy, business letters, tables and tabulations, and reports.

AOT 108 Shorthand/Notetaking I

3 Credits

Emphasizes basic theory, brief forms and speed in reading from notes and the textbook. Focuses on the correct way to write shorthand. Uses dictation with emphasis placed on writing and transcription techniques.

AOT 109 Professional Development

2 Credits

Enables students to analyze and improve themselves in terms of posture, weight control, personal hygiene, grooming, wardrobe, personality, communication and job application skills for success in employment. Includes resume preparation and interviewing skills.

AOT 110 Keyboarding Skill Development

1 Credit

Designed to help experienced typists gain greater speed and accuracy.

AOT 111 Shorthand/Notetaking 2

3 Credits

Develops dictation, notereading and transcription skills through drills and tests. Emphasizes speed, accuracy and use of correct English. Reinforces and builds on principles and skills learned in Shorthand/Notetaking I.

AOT 112 Data Entry

3 Credits

Emphasis placed on accuracy and speed.

AOT 113 Office Calculating Machines

1 Credit

Teaches students to use the 10-key electronic printing/display calculator. Develops competence with the desk calculator and familiarity with the types of business problems they commonly solve.

AOT 116 Business Communications

3 Credits

Develops communications skills for use in business and industry. Focuses on writing effective business letters, memos, reports, and reviewing grammar and punctuation rules.

AOT 119 Document Production

3 Credits

Emphasizes increasing speed, improving accuracy, developing and applying formatting skills, applying communication and language arts skills, and learning document production techniques.

AOT 202 Information/Word Processing Applications

3 Credits

Knowledge acquired from Information/Word Processing Concepts will be further enhanced as more sophisticated features of a word processing package are learned and applied.

AOT 206 Shorthand/Notetaking 3

3 Credits

Reviews fundamentals learned in Shorthand/Notetaking 1 and 2. Emphasizes skill in taking new matter dictation with more emphasis on transcribing mailable letters. Stresses essentials of good English principles.

AOT 207 Office Automation Applications**3 Credits**

Provides instruction in the use of computers and computer software. Covers mastery of spreadsheet and database software programs. Explores the integration of these packages with a word processing package. Assists students in applying their knowledge of office automation systems to make decisions, solve problems, and facilitate information in an office support setting.

AOT 208 Microcomputer Word Processing

2 Credits

Covers production techniques including typing, formatting, editing and printing variable output, and use of the electronic dictionary. Includes production applications such as merging letters with mailing lists, making math computations during document creation, sorting files and printing out newsletters and other multiple-column formats.

AOT 210 Office Systems and Technology Management**3 Credits**

Acquaints students with the management of office systems, technology and procedures. Includes the improvement of productivity through technology and systems, optimization of personnel resources, systems selection, configuration, design and implementation and procedures development.

AOT 211 Word Processing Files Management

3 Credits

Covers designing and managing the file system by creating, adding, revising and deleting files. Demonstrates how to create, use, change and update files on a word processing system or personal computer using database software.

AOT 212 Micro Word Processing

3 Credits

Deals with business applications of word processing software on microcomputer work stations. Includes practical applications in the use of a microcomputer word processing software.

AOT 213 Advanced Information/Word Processing Applications

3 Credits

Develops the ability to transfer information processing skills to a second word processing package. Allows the students to apply these skills to the legal, medical or office automation option.

AOT 214 Desktop Publishing

3 Credits

Provides computer skills in the production of camera-ready materials through electronic publishing.

AOT 215 Legal Term/Practice

3 Credits

Provides basic understanding of the secretarial duties and responsibilities pertinent to the legal profession. Presents ethics of law and professional conduct. Includes laboratory experience.

AOT 216 Practicum/Internship

3 Credits

AOT 217 Machine Transcription/Medical I

2 Credits

Provides basic understanding of the techniques of dictation and transcription used by medical assistants.

AOT 219 Specialized Formatting/Transcription

3 Credits

Emphasizes production techniques, which include correspondence, business forms, manuscripts, tabulations and secretarial projects. Emphasizes composition skills and the application of communications skills. Includes transcription from machine dictation and an introduction to products, services and terminology encountered in business organizations.

AOT 220 Document Management

3 Credits

Focuses on management and control of documents from creation to disposition, using manual, automated and electronic media. Discusses records management personnel, equipment, and procedures.

AOT 221 Office Management and Procedures

3 Credits

Provides a culminating study of the management of business office systems and procedures. Covers problem-solving techniques, selection of office structures, personal and organizational dynamics, cooperative and teamwork activities, communication abilities and job search skills.

AOT 224 Advanced Desktop Publishing

3 Credits

Provides hands-on experience and familiarizes students with specific advanced design and layout techniques and practical applications of desktop publishing.

AOT 281-293 Special Topics in Administrative Office

1-5 Credits

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

AST 102 Two-/Four-Wheel Alignment

3 Credits

Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AST 102 Ford STST Steering

3 Credits

Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AST 102 GM STG Steering and Alignment

3 Credits

Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AST 102 T-Ten Alignment

3 Credits

Covers the principles of two- and four-wheel alignment and wheel balance. Emphasized practical work experience in the lab covering all the alignment angles.

AST 104 Start and Charge Systems

3 Credits

Studies construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

AST 104 Ford Start and Charge Systems

3 Credits

Studies construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

AST 104 GM Start and Charge Systems

3 Credits

Studies construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

AST 104 T-Ten Start and Charge Systems

3 Credits

An intensive study of the Toyota construction, function, and principle of operation of starting motors, charging systems and their control systems, with emphasis on diagnosis and repair. The study will include basic principles and rules that govern the operation of electrical circuits, systems, components and equipment that relate to the subject.

AST 105 Ford Fuel Systems

3 Credits

Studies automotive fuel systems: single, double, and four barrel carburetors, fuel injection systems, and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

AST 105 GM Fuel Systems

3 Credits

Studies automotive fuel systems: single, double, and four barrel carburetors, fuel injection systems and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

AST 105 Toyota Fuel Systems

3 Credits

Studies automotive fuel systems: single, double, and four barrel carburetors, fuel injection systems and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

AST 105 Fuel Systems

3 Credits

Studies automotive fuel systems: single, double and four barrel carburetors, fuel injection systems and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

AST 201 Ford STST Climate Control

3 Credits

Provides an in-depth study of automotive air conditioning and heating. Emphasizes the operation and theory of air conditioning and its components. Includes Electronic temperature control systems, related computers as well as operation of R-134a systems and reclaim/recovery equipment.

AST 201 GM STG Climate Control

3 Credits

Provides in in-depth study of automotive air conditioning and heating. EMphasizes the operation and theory of air conditioning and its components. Includes Electronic temperature control systems, related computers as well as operation of R-134a systems and reclaim/recovery equipment.

AST 201 Toyota Climate Control

3 Credits

Provides an in-depth study of automotive air conditioning and heating. Emphasizes the operation and theory of air conditioning and its components. Includes a study of vacuum and electrical control circuits.

AMV 202 Ford SST Electronic Engine Controls

3 Credits

This course examines computerized ignition, carburetor, fuel injection and sensors for engine controls on late model passenger cars. Covers theory, diagnostic procedure and repair procedure of the EEC-IV systems.

AMV 202 GM Computer Engine Controls

3 Credits

This course examines computerized ignition, carburetor, fuel injection and sensors for engine controls on late model passenger cars. Covers theory, diagnostic procedure and repair procedure of the General Motors HEI and DIS systems.

AMV 202 Toyota Computer Control System

3 Credits

This course examines computerized ignition, fuel injection, and sensors for engine controls on late model Toyota passenger cars. Content includes theory, diagnostic procedures, and repair if EFI and TCCS.

AST 203 Ford STST Engine Repair

3 Credits

Covers precision machines, tools and equipment needed for rebuilding today's modern engine. Includes repair, proper assembly and installation techniques applicable to the modern engine.

AST 203 GM Engine Rebuild

3 Credits

Covers precision machines, tools and equipment needed for rebuilding today's modern engine. Includes repair, proper assembly and installation techniques applicable to the modern engine.

AST 204 Ford Automatic Transmission/Transaxle

3 Credits

Deals with construction, and functions and principles of operation. Emphasizes practical work experience in the lab where students will overhaul automatic transmissions and transaxle assemblies.

AST 204 GM Automatic Transmission/Transaxle

3 Credits

Deals with construction, and functions and principles of operation. Emphasizes practical work experience in the lab where students will overhaul automatic transmissions and transaxle assemblies.

AST 205 Ford Manual Transmission/Transaxle

3 Credits

Presents theory and overhaul procedures related to the manual transmission/transaxle, including clutches and transfer cases and diagnosis and overhaul of the manual power train.

AST 205 Toyota Manual Transmission/Transaxle

3 Credits

Presents theory and overhaul procedures related to the manual Transmission/ transaxle, including clutches and transfer cases and diagnosis and overhaul of the manual power train.

AST 205 GM Manual Transmission/Transaxle

3 Credits

Presents theory and overhaul procedures related to the manual transmission/transport, including clutches and transfer cases and diagnosis and overhaul of the manual power train.

AST 206 Heating and Air Conditioning Service and Repair

3 Credits

Covers diagnosis, service and repair procedures of the heating/air conditioning system. Includes replacement and overhaul procedures for components related to heating/air conditioning systems.

AST 207 Ford STST Advanced Engine Performance

3 Credits

An advanced course in the theory, diagnosis, and repair of Ford computer controlled ignitions and fuel systems, and emission controls on late model vehicles, using state-of-the-art diagnostic equipment. Emphasis is on recommended manufacturer methods for servicing the computer controlled ignition, fuel, and emission controls.

AST 207 GM STG Drivability

3 Credits

An advanced course in the theory, diagnosis, and repair of G.M. computer controlled ignitions and fuel systems, and emission controls on late model vehicles, using state-of-the-art diagnostic equipment. Emphasis is on recommended manufacturer methods for servicing the computer controlled ignition, fuel, and emission controls.

AST 207 Toyota Engine Performance

3 Credits

An advanced course in the theory, diagnosis, and repair of Toyota computer controlled ignitions and fuel systems, and emission controls on late model vehicles, using state-of-the-art diagnostic equipment. Emphasis is on recommended manufacturer methods for servicing the computer controlled ignition, fuel, and emission controls.

AST 209 T-Ten Braking Systems

3 Credits

Covers theory, service and repair of automotive braking systems and their components. Emphasizes hydraulic theory and the repair and service of booster units, master cylinder, wheel cylinder, caliper rebuilds and drum and rotor service.

AST 209 Ford Automotive Braking Systems

3 Credits

Covers theory, service and repair of automotive braking systems and their components. Emphasizes hydraulic theory and the repair and service of booster units, master cylinder, wheel cylinder, caliper rebuilds and drum and rotor service. Course includes theory, operation and diagnosis of TEVES and MARK IV Anti-Lock brake systems including operation and use of diagnostic tools and related computer systems.

AST 209 GM STG Braking Systems

3 Credits

Covers theory, service and repair of automotive braking systems and their components. Emphasizes hydraulic theory and the repair and service of booster units, master cylinder, wheel cylinder, caliper rebuilds and drum and rotor service. Course includes theory, operation and diagnosis of RWAL and 4WAL Anti-Lock brake systems including operation and use of diagnostic tools and related computer systems.

AST 220 Ford Transaxle and Driveline Service

3 Credits

This course is a study of differential and driveline theory and overhaul. The study includes overhaul and service procedures applicable to gear sets, bearings and seals. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles are also included.

AST 220 GM STG Transaxle and Driveline Service

3 Credits

A study of differential and driveline theory and overhaul. Includes overhaul and service procedures applicable to gear sets, bearings and seals. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles is included.

AST 220 Toyota Transmission/Transaxle Service

3 Credits

A study of theory and overhaul procedures of Toyota manual and electronic controlled transfer case assemblies, differential and driveline. Includes overhaul and service procedures to gear sets, bearings, seal and electrical related components. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles is included.

AST 220 Transaxle and Driveline Service

3 Credits

A study of differential and driveline theory and overhaul. Includes overhaul and service procedures applicable to gear sets, bearings, and seals. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles is included.

AST 288.02 FORD STST Electronic and Accessory Systems**3 Credits**

This course is an advanced study of on-board vehicle electronic systems, computers and diagnostic equipment. Serial communications, scanners and oscilloscopes are integrated with concentration on schematic reading and problem solving. Course includes operation and diagnosis of various vehicle accessory systems.

AST 288.01 GM STG Electronic and Accessory Systems**3 Credits**

This course is an advanced study of on-board vehicle electronic systems, computers and diagnostic equipment. Serial communications, scanners and oscilloscopes are integrated with concentration on schematic reading problem solving. Course includes operation and diagnosis of various vehicle accessory systems.

AST 288.03 Toyota Electronic and Accessory Systems**3 Credits**

This course is an advanced study of on-board vehicle electronic systems, computers and diagnostic equipment. Serial communications, scanners and oscilloscopes are integrated with concentration on schematic reading and problem solving. Course includes operation and diagnosis of various vehicle accessory systems.

AST 288.04 Electronic and Accessory Systems**3 Credits**

This course is an advanced study of on-board vehicle electronic systems, computers and diagnostic equipment. Serial communications, scanners and oscilloscopes are integrated with concentration on schematic reading and problem solving. Course includes operation and diagnosis of various vehicle accessory systems.

BKR 101 Yeast- Raised Breads and Tools**3 Credits**

Prepares students to produce a variety of yeast-raised breads and rolls using both straight dough and sponge dough methods. Emphasizes proper mixing, fermentation, make-up proofing and baking.

BKR 102 Plasticized and Sweet Doughs**3 Credits**

Prepares students to produce a variety of pastries. Emphasizes proper poofing, baking and finishing. Focuses on sanitation, hygienic work habits and their conformance with health regulations.

BKR 103 Internship**3 Credits**

Requires students to produce yeast raised and plasticized/sweet dough products for limited retail sale for a 12-week period. Studies merchandising and marketing, planning, production, controlling scrap, cash recaps and all pertinent phases of retail bake shop operation.

BKR 201 Cakes, Icings, and Fillings**3 Credits**

Requires students to produce and finish a variety of cakes. Emphasizes application techniques, color coordination and the flavor and texture of fillings. Practices the techniques of basic cake decorating. Emphasizes sanitation, hygienic work habits and their conformance with health regulations.

BKR 202 Classical Cake Decorating

3 Credits

Presents the six different classical styles of cake decorating, the production of gum paste objects which accompany the styles, the use of royal icings and investigates the similarities and differences between the six styles. Students will be required to produce examples of each style and technique, to include two practical examinations.

BKR 204 Externship

3 Credits

Requires practical work experience in chosen area of specialization. Students work in an approved site for a minimum of 144 hours, complete and submit a detailed log book, and have at least two site evaluations by immediate supervisor, one evaluation by faculty facilitator and a final group conference.

BUS 101 Introduction to Business

3 Credits

Examines the U.S. business system in relation to the nation's economy. Studies business ownership, organization principles and problems, management, control facilities, administration and development practices of American business enterprises.

BUS 102 Business Law

3 Credits

Describes the judicial system and the nature and sources of law affecting business. Studies contracts, sales and negotiable instruments with emphasis on Uniform Commercial Code applications. Includes appropriate remedies for breach of contract and tort liabilities. Examines business structures and agency.

BUS 103 Office Administration

3 Credits

Covers broad areas of administrative office services and management, including office organization, site location, layout and environment, records management, systems controls, office communication services and devices.

BUS 104 Investment

3 Credits

Presents the basis of investing, with attention to the various ways in which investment vehicles operate.

BUS 105 Principles of Management

3 Credits

Describes the functions of managers, including the management of activities and personnel. Focuses on application of guidance principles in management.

BUS 107 Transportation Law

3 Credits

Reviews judicial systems and regulatory agencies, regulatory acts, Motor Carrier Act of 1980, Staggers Rail Act of 1980, obligations, rights and liabilities, regulation of rates and rate-making agreements.

BUS 108 Personal Finance

3 Credits

Emphasizes management of individual financial resources for growth and maintenance of personal wealth. Covers home buying and mortgage financing, installment financing, life and health insurance, securities, commodities and other investment opportunities.

BUS 202 Human Resource Management

3 Credits

Focuses on the activities of human resource management, with emphasis on employer-employee relations, job analysis and evaluation, salary administration, work measurement and standards, performance appraisal and legal compliance.

BUS 203 Entrepreneurship

3 Credits

Explores business operations for the self-employed or managers employed in a small business enterprise.

BUS 204 Case Problems in Management

3 Credits

Applies business concepts and principles to specific case studies or problems.

BUS 205 Risk Management

3 Credits

Examines risk faced by business firms and considers ways of handling them. Covers property, liability and personal losses, with attention to insurance contracts and their uses. Studies individual life, health and pension insurance, public policy, government regulations and social insurance programs.

BUS 207 Introduction to International Business

3 Credits

Provides an overview of the international environment within which business operates today. Demonstrates the global relationships between business activities and how events in one part of the world can influence business decisions and activities in other parts of the world.

BUS 208 Organizational Behavior

3 Credits

Studies human behavior in organizations at the individual and group level, including the effect of organizational structure on behavior. Focuses on using organizational behavior concepts for developing and improving interpersonal skills.

BUS 210 Managerial Finance

3 Credits

Improves decision making skills related to the financial resources of a firm. Includes techniques of financial analysis, time value of money, capital budgeting and risk.

BUS 240 Introduction to Computer Integrated Manufacturing

3 Credits

Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers the planning of a project which will be formally documented and presented by students and implemented in BUS 241.

BUS 241 Computer-Integrated Manufacturing

1-6 Credits

Covers the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of a project in a realistic CIM environment.

BUS 280 Co-op/Internship

1-6 Credits

Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

BUS 281-293 Special Topics in Business Administration

1-5 Credits

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CHD 121 Introduction to Early Childhood Profession

3 Credits

Introduces the philosophy of early childhood education. Includes theories of discipline, parent involvement, self-concept and an overview of various early childhood settings. Includes lectures, field trips and observations.

CHD 122 Child Growth and Development

3 Credits

Studies the physical, social, emotional and cognitive development of children from conception to age eight, as well as their quality care and education. Includes lectures and observations.

CHD 123 Health, Safety, and Nutrition

3 Credits

Analyzes basic safety, health, and nutrition needs. Emphasizes applications related to early childhood programs.

CHD 124 Developmental and Cultural Awareness

3 Credits

Provides a basic understanding of the anti-bias/multi-cultural emphasis in the field of early childhood. Analyzes developmentally appropriate practices, theory and implementation for various early childhood settings. Includes lectures, field trips, review of current literature and observations.

CHD 125 Curriculum in the Creative Arts

3 Credits

Examines materials, methods and teaching of creative arts to young children. Offers appropriate music, movement, art and drama experiences for use in early childhood settings. Reviews theories of development of the young child.

CHD 130 Child Development Practicum I

4 Credits

Provides opportunity for practical experience through observation and supervised participation in child care settings. Requires successful completion of the practicum to advance to Practicum II.

CHD 131 Seminar in Guidance Techniques

2 Credits

Surveys positive guidance techniques and skills that are effective with young children. Provides student with the opportunity to observe children and attempt to understand their needs.

CHD 206 Early Child Administration

3 Credits

Introduces principles of managing a child care program. Emphasizes the manager's role including personnel and program administration and fiscal management. Explores client-community relations.

CHD 207 Families in Transition

3 Credits

Examines the stages of the family life cycle and interpersonal relationships among family members.

CHD 211 School- Age Programming**3 Credits**

Examines materials, methods and teaching styles for creative experiences for school age children. Offers appropriate experiences in music, movement, art, and drama for use in school age child care settings. Reviews theories of adolescent growth and development.

CHD 212 Adolescent Child Growth and Development**3 Credits**

Studies in a lecture/laboratory setting the physical, social, emotional and cognitive development of children 8-15 years old.

CHD 213 Infant/Toddler Care Programming**3 Credits**

Studies the physical, social, emotional and cognitive development of children 0-36 months old in a lecture/laboratory setting.

CHD 216 The Exceptional Child**3 Credits**

Provides an introduction to caring for the exceptional child. Includes theories and practices for producing optimal developmental growth. Develops teaching techniques. Explores public policy, mainstreaming, early intervention and IEPs. Explores the types of exceptional children and how to help them.

CHD 217 Skills for Parenting**3 Credits**

Focuses on skill development to increase parental effectiveness in understanding young children, building their self-esteem, communicating with them, setting appropriate boundaries and nurturing children's emotional and social development.

CHD 218 Introduction to In-Home Care**3 Credits**

Reviews child care offered in a home-like setting. Includes providing safe, healthy learning environments in the home setting, parent-provider relationships and recommendations for developing a professional support system.

CHD 221 Emerging Literacy in Young Children**3 Credits**

Provides understanding of the development and acquisition of language. Explores and evaluates literature for young children. Introduces audio-visual material, methods, techniques and various types of equipment which are utilized in early childhood programs.

CHD 225 Cognitive Curriculum**3 Credits**

Reviews cognitive theories to develop appropriate problem solving, math, science and social studies skills in early childhood settings. Reviews multi-cultural education.

CHD 230 Child Development Practicum II**4 Credits**

Provides opportunity for practical experience through observation and supervised participation in child care settings.

CHD 231 Seminar II - Issues in Early Childhood Education**2 Credits**

Companion course to CHD 230. Focuses on the integration of knowledge and practices in the field of early childhood and explores issues in early childhood.

CHD 240 Child Development Associate Preparation
3 Credits

Meets requirements of the Council for Early Childhood Professional Recognition for academic preparation for the Child Development Associate credential. Provides students with the theoretical knowledge to support competent performance in a child care setting. Provides review of CDA competencies.

CHD 242 Curriculum Planning for Early Administrators Childhood
3 Credits

131 Presents an overview of cognitive and creative curriculum from a developmentally appropriate perspective. Emphasizes planning and evaluating curriculum to meet comprehensive needs of the young child.

CHD 281-293 Special Topics in Child Development
1-5 Credits

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CIS 101 Introduction to Microcomputers
3 Credits

Introduces the physical components and operations of microcomputers. Focuses on computer literacy and provides hands-on training in three areas of microcomputer application software: word processing, electronic spreadsheets and database management.

CIS 102 Data Processing Fundamentals
3 Credits

Introduces data processing and programming with emphasis on hands-on computer experience. Examines the role of data processing in an organization, including data processing applications, computer hardware and software, internal data representation, stored program concepts, systems and programming design, flowcharting and data communications. Reviews the history of computers, related computer careers, the social impact of computers and computer security.

CIS 103 Data Processing Fundamentals
3 Credits

Introduces the structured techniques necessary for efficient solution of business-related computer programming logic problems and coding solutions into a high-level language. Includes program flowcharting, pseudocoding and hierarchy charts as a means of solving these problems. Covers creating file layouts, print charts, program narratives, user documentation and system flowcharts for business problems. Reviews algorithm development, flowcharting, input/output techniques, looping, modules, selection structures, file handling and control breaks. Offers students an opportunity to apply skills in a laboratory environment.

CIS 104 Introduction to COBOL Programming
3 Credits

Provides an introduction to COBOL (Common Business Oriented Language) with major emphasis on developing structured programming skills. Develops proficiency in applying the programming development cycle to elementary business problems.

CIS 105 Operating Systems
3 Credits

Studies computer operating systems, purposes, structure and various functions. Provides general understanding of how comprehensive sets of language translators and service programs, operating under supervisory coordination of an integrated control program, form the total operating systems of a computer.

CIS 106 Microcomputer Operating System
3 Credits

Introduces the organization, structure and functions of an operating system for a microcomputer. Presents the student with operating system concepts such as commands, error messages, interrupts, function calls, device drivers, structure, files and organization. Incorporates concepts into practical applications.

CIS 107 Microcomputer Programming**3 Credits**

Introduces a structured microcomputer language. Concepts in input/output commands, arithmetic expressions, conditional control, iteration techniques and subroutines will be stressed. Concepts will be incorporated into the application of solving business problems.

CIS 109 UNIX Operating System

3 Credits

Studies the UNIX V Operating System and its use as a time-sharing operating system. Includes basic UNIX commands, use of the visual editor, the UNIX directory structure and file management with SHELL commands. Offers opportunities to apply skills and knowledge in a laboratory environment.

CIS 110 Basic Programming Language

3 Credits

Introduces concepts of program design and programming using the BASIC programming language, the primary language for use with microcomputers. Includes overview of basic arithmetic operations, accumulating and printing totals, comparing, array processing and interactive programming. Offers students an opportunity to apply skills in a laboratory environment.

CIS 115 Electronic Spreadsheets in Business

3 Credits

Provides conceptual and hands-on instruction in the use of spreadsheet software including worksheet, graphics and database operations with applications to the solution of business problems.

CIS 201 Database Design & Management

3 Credits

Introduces program applications in a database environment and includes discussion of data structures; indexed and direct file organizations; data models, including hierarchical, network, and relational; storage devices, data administration and analysis; design and implementation. Allows students to use database software in creating, modifying, retrieving and reporting from databases. Develops business application using a database language.

CIS 202 Data Communications

3 Credits

Introduces concepts of data communications for computer programming students to build a foundation of knowledge upon which to add new technologies.

CIS 203 Systems Analysis and Design

3 Credits

Provides instruction for creating or modifying a system by gathering details, analyzing data, designing systems to provide solutions and implementing and maintaining the systems.

CIS 204 Advanced COBOL Programming

3 Credits

Continues topics introduced in Introduction to COBOL with more logically complex business problems. Develops a higher level of COBOL proficiency, as well as greater familiarity with debugging techniques. Uses the structured approach through class instruction and laboratory experience.

CIS 205 Database Design

3 Credits

Introduces program applications in a database environment with emphasis on loading, modifying and querying the database by means of a host language (COBOL). Discusses data structures, indexed and direct file organizations, models of data, including hierarchical, network and relational, storage devices, data administration and analysis, design and implementation.

CIS 206 Systems Development with High-Level Tools**3 Credits**

Analyzes established and evolving methodologies for the development of business-oriented computer information systems. Develops competencies in techniques that apply modern software tools to generate applications directly, without requiring detailed and highly technical program writing efforts.

CIS 207 Microcomputer Database Management Systems**3 Credits**

Presents an overview of relational, hierarchical and network database models with emphasis on microcomputer relational database management systems (DBMS). Provides practical experience in using database software to create, modify, retrieve and report. Develops business applications using the database language.

CIS 208 Electronic Spreadsheets**3 Credits**

Presents an in-depth study of an electronic spreadsheet. Focuses on business applications using menu commands, formulas, functions, macro commands, graphs, printing, database and file operations.

CIS 209 Computer Business Applications**3 Credits**

Requires students to apply business, microcomputer and communication skills within business applications. Emphasizes application of several forms of computerized information processing including data processing, word processing, spreadsheets, graphics and communications. Analyzes the effects of automation on the office worker, management and the work environment and requires written and oral presentations.

CIS 210 COBOL III**3 Credits**

Emphasizes file handling techniques on tape and direct access devices and the use of libraries via the COBOL CALL and COPY verbs. Introduces variant forms of the structured approach and unstructured concepts such as the GO TO verb. Helps students develop good programming practices and an entry-level COBOL competency.

CIS 211 RPG Programming Fundamentals**3 Credits**

Provides a general introduction to the RPG programming language with emphasis on hands-on programming experience. Presents the most important features of the RPG language from input/output processing to applications requiring handling. Introduces language concepts in class lecture. Includes programming lab assignments.

CIS 212 "C" Programming**3 Credits**

Provides a basic understanding of the fundamental concepts involved when using a low development language. Emphasizes one logical program design using a modular approach involving task-oriented program functions. Discusses the role of data types, storage classes and addressable memory locations.

CIS 213 Assembler Language Program**3 Credits**

Gives students a basic understanding of the assembler process using IBM mainframe computers. Stresses the importance of byte-wise manipulation of data fields when using low-level languages. Emphasizes the actual workings of a computer during the execution of a computer program. Discusses the role of data types, EBCDIC format of data storage and addressable memory locations.

CIS 214 Pascal Programming**3 Credits**

Provides a basic understanding of the structured programming process necessary for successful Pascal programming. Emphasizes top down program design and modularity, using Pascal procedures, functions and independent subprograms. Discusses simple and advanced data types and program control aids, algorithm development and program debugging. Provides students with a fundamental understanding of good programming technique and a basic knowledge of Pascal syntax and structure.

CIS 215 Field Study**4 Credits**

Provides opportunity for a field project or research case study within the computer technology field. Includes collection and analysis of data and/or actual work experience in business or industry.

CIS 216 Advanced RPG Programming**3 Credits**

Offers advanced study in the use of the RPG compiler language in solving business problems. Focuses on file processing methods and a working knowledge of advanced features and techniques through laboratory experience.

CIS 220 Shell Command Language**3 Credits**

Teaches students how to write, test and debug shell procedures on a computer utilizing a UNIX operating system. Presents the shell and how it works, shell processes, variables, keyword and positional parameters, control constructs, special substitutions, pipelines, debugging aids, error/interrupt processing and shell command line. Offers students the opportunity to apply skills in a laboratory environment.

CIS 221 Advanced "C" Programming**3 Credits**

Continues those topics introduced in "C" Language Programming with emphasis on array processing, file processing and advanced debugging techniques. Provides the opportunity to apply skills in a laboratory environment.

CIS 222 Office Automation**3 Credits**

Presents a perspective on the needs, potentials and urgencies of systems to support modern office functions. Concentrates on structured analysis and design of hardware/software systems for creating, maintaining, printing and communicating data files utilizing text processing systems. Covers methodologies for creating procedures to produce letters and reports from data files. Incorporates concepts and techniques into practical applications.

CIS 223 Integrated Business Software**3 Credits**

Presents knowledge of integrated microcomputer software concepts. Students design a complete business system utilizing all parts of an integrated microcomputer software package which can share the same data and manipulate it. Includes use of word processing, electronic spreadsheets, graphics, databases and command language.

CIS 224 Hardware and Software Troubleshooting**3 Credits**

Presents an in-depth analysis of the components of a computer system and their relationship to each other. Includes concepts of parallel and serial connectivity, installation and maintenance of software, peripheral devices, interface cards and device drivers. Analyzes realistic hardware/software problems encountered in the workplace and techniques and procedures used to implement solutions.

CIS 225 Advanced Database Management Systems**3 Credits**

Continues CIS 207 Microcomputer Database Management Systems. Emphasizes the development of advanced applications in database management.

CIS 226 Advanced Electronic Spreadsheets

3 Credits

Continues CIS 208 Electronic Spreadsheets. Emphasizes the advanced application of electronic spreadsheets.

CIS 227 Topics in Information Management

3 Credits

Discusses topics of current interest in information management. Focuses on special interest projects. Utilizes field trips, guest speakers, audio-visual activities and seminars.

CIS 228 Cooperative Education

1-9 Credits

Provides students with the opportunity to apply concepts learned in the classroom to actual work situations. Requires program advisor approval.

CIS 229 Seminar I

1 Credit

Discusses topics of current interest in computerized information management with an emphasis on the application of information management skills during lab time. Various seminar topics may be identified and offered each term under this course number.

CIS 230 Seminar II

2 Credits

Discusses topics of current interest in computerized information management with emphasis on application of information management skills during lab time. Identifies and offers various seminar topics each term under this course number.

CIS 232 Visual Basic Programming

3 Credits

Provides a basic understanding of fundamental concepts involved when using a member of a Windows programming development language. Emphasizes logical program design using a modular approach involving task-oriented program functions. Allows the design of a Windows user interface constructed in an erector-set-like fashion. Builds an application by selecting forms and controls, assigning properties and writing code.

CIS 233 Graphic User Interfaces: Windows

3 Credits

Provides a foundation of fundamental concepts in the use of Windows-type software. Explores the Windows operating system, accessories and various applications. Develops a proficiency with Windows operations including customizing the environment, integrating applications and managing files.

CIS 234 XBase Programming Language

3 Credits

Provides a basic understanding of the fundamental concepts involved when using a high-level development database language. Emphasizes logical program design using a modular approach. Provides a sound foundation of fundamental concepts, such as the XBase functions.

CIS 235 Local Area Networks

3 Credits

Studies local area networks, their topologies and functions. Provides a general understanding of the basic LAN protocols. Covers utilization of application software using a local area network to share resources among network members, transferring files between users, set-up and administration of a network, identification of hardware and software needs and LAN to mainframe connectivity.

CIS 240 Introduction to Computer Integrated Manufacturing

3 Credits

Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Includes the planning of a project which will be formally documented and presented by the students and implemented in CIS 241.

CIS 241 Computer-Integrated Manufacturing Project

3 Credits

Covers the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of a project in a realistic CIM environment.

CIS 280 Co-op/Internship

1-6 Credits

Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

CIS 281-293 Special Topics in Computer Information Systems

1-5 Credits

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CTR 114 Institutional Catering

3 Credits

The fundamentals of catering: the business of supplying food, goods, and organized service for public and private functions. Includes staffing, equipment, transportation, contracting, special arrangements, beverage service, and menu planning. Also covers cold food preparation and presentation techniques.

CTR 214 Catering Administration

3 Credits

This course teaches the correct procedures in event bookings, contracts, recordkeeping and event follow-up. In addition, fringe services, human resource issues and cost control concepts.

CUL 105 Institutional Food Service

2 Credits

Introduces students to the variety of institutional food service facilities. Includes converting recipes for quantity food production, calculating per portion cost and determining profitable selling price.

CUL 110 Meat Cutting

2 Credits

Purchasing, receiving, aging and proper storage procedures will be identified. Emphasis will be placed on primal cuts and sub-primal cuts, federal inspection, grading, yields, and the classifications of meats, poultry, and game.

CUL 202 Specialized Cuisine

3 Credits

Introduces students to foods from various cultures. Provides a background in the history of foods from various countries and develops food preparation skills. Covers table service and table side food preparation.

CUL 204 Classical Pastries

3 Credits

Familiarizes students with Classic French, Italian and European desserts. Discusses names and terminology of desserts. Includes the preparation of goods such as puff pastry, specialty cookies, ganache, parlmosa creams and fillings and specialty sauces. Emphasizes size, consistency, presentation, eye appeal and taste of pastries.

CUL 205 Fish and Seafood

2 Credits

Familiarizes students with professional techniques in identifying, purchasing, handling, storing, marketing, and preparing fish and seafood.

CUL 206 Externship

3 Credits

Provides students with practical work experience in chosen areas of specialization.

CUL 211 Classical Cuisine

3 Credits

Presents advanced and sophisticated classical culinary methods following the principles and techniques of Escoffier. Studies cooking techniques, timing, presentation, history and terms pertaining to classical foods and menus, with emphasis on French cuisines. Provides practical experience in table service operation, kitchen coordination and timing.

CUL 212 Fish and Seafood

2 Credits

Discusses the importance of fish and seafood in today's market. Includes types and categories of American and imported fish and shell fish, and proper buying, storage, preparation and merchandising of fish and seafood. Provides experience in boning, cutting and cooking methods appropriate for seafood.

CUL 288 Special Topics in Culinary Arts Technology

11-5 Credits

DCT 104 Product Drafting

3 Credits

Introduces the set concept of working drawings both in detailing and assembly. Presents fastening devices, thread symbols and nomenclature, surface texture symbols, classes of fits, and the use of parts lists, titles and revision blocks. Introduces the basics of product design and the design process.

DCT 105 Facilities Design and Layout

3 Credits

Focuses on the architectural drawings of commercial or industrial buildings. Covers problems of space planning, design, materials, HVAC systems and construction methods. Develops working drawings and presentation drawings. Requires oral presentations and discussions. Requires students to complete research on a limited number of construction materials and methods.

DCT 109 Construction Materials and Specifications

3 Credits

Introduces various construction materials, composition and application. Studies specifications of materials, construction contracts and applications required in the building industry.

DCT 113 Intermediate CAD

3 Credits

Continues study of CAD fundamentals. Focuses on advanced CAD features and various methods of customizing CAD systems.

DCT 201 Schematic Drafting

3 Credits

Presents the systematic layout of various types of schematic drawing done by a draftsman. Requires students to prepare finished drawings for manufacture or installation of plumbing, heating, electrical, electronic and fluid-power type drawing.

DCT 202 CAD Programming Language**3 Credits**

Covers use of AutoLISP programming language to customize Autocad programs and and menus. Students will learn to execute macros and simple LISP programs.

DCT 204 Architectural CAD**3 Credits**

Presents advanced computer-aided design topics, including architectural design. Includes all necessary drawings needed for the construction process.

DCT 206 Mechanical and Electrical Equipment**3 Credits**

Focuses on mechanical and electrical requirements for a structure. Studies electrical load calculations, wire sizing and circuits. Calculates plumbing requirements, fixture units and pipe sizing. Includes heating systems, duct layout and sizing.

DCT 208 Structural Detailing**3 Credits**

Focuses on detailing commercial structural members, their connections, materials and methods of construction. Concentrates on traditional materials, such as reinforced concrete, masonry, steel and timber.

DCT 210 Surveying I**3 Credits**

Introduces surveying equipment, procedures for performing measurements, turning angles, determining grades and other field applications. Covers surveying techniques and computations using the level, chain and transit in calculating areas, lines and grades.

DCT 213 CAD Mapping**3 Credits**

Covers the concepts of map making with computer-aided drafting and typical drafting media found in the industry. Studies civil engineering applications of mapping procedures including profiles, topography and site plans.

DCT 216 Jig and Fixture Design**3 Credits**

Introduces the processes of drafting and design as applied to tooling. Emphasizes tooling, locators, supports, holding devices, clearances and design as it pertains to jig and fixtures.

DCT 217 Product Design**3 Credits**

Provides the student an opportunity to apply all previously acquired knowledge in product drafting to the design of a new or existing consumer product. Considers the function, esthetics, cost economics and marketability of the product. Requires a research paper and product illustration.

DCT 228 Civil I**3 Credits**

Explores the engineering field. Presents an overview of infrastructure design, including the study of roadways and drainage systems. Emphasizes site development and highway planning.

DCT 229 Civil II**3 Credits**

Presents construction management techniques, including scheduling and contracts. Studies soil properties and paving methods. Examines practical construction considerations.

DCT 240 Introduction to Computer Integrated Manufacturing**3 Credits**

Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Includes the planning of a project which will be formally documented and presented by students and implemented in DCT 241.

DCT 241 Computer-Integrated Manufacturing Project**3 Credits**

Covers the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of a project in a realistic CIM environment.

DSN 103 CAD Fundamentals**3 Credits**

Introduces fundamentals of CAD (Computer-Aided Drafting). Includes overview of CAD and systems, use of software and plotter applications. Each student will complete an individual project by the end of the semester.

DSN 106 Descriptive Geometry**3 Credits**

Introduces fundamental principles in developing graphical solutions to engineering problems. Covers true length, piercing points on a plane, line intersections, true shapes, revolutions and developments using successive auxiliary views.

DSN 220 Advanced CAD**3 Credits**

Focuses on advanced CAD features, including fundamentals of three-dimensional modeling for design. Includes overview of modeling, graphic manipulation, part structuring, coordinate system and developing strategy of model geometry.

DSN 221 Statics**3 Credits**

Studies applied mechanics dealing with bodies at rest. Covers units, vectors, forces, equilibrium, moments and couples, planar force systems, distributed forces, analysis of structures (trusses and frames) and friction.

DSN 222 Strength of Materials**3 Credits**

Studies internal stresses and physical deformations caused by externally applied loads to structural members. Covers stress and strain, shear stress, properties of areas, shearing force and bending moment, deformation of beams, columns and combined stresses. Teaches various materials' physical and mechanical properties.

DSN 281-293 Special Topics in Design Technology**1-5 Credits**

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ELT 100 Circuits I**4 Credits**

This course is the study of electrical principles and laws pertaining to DC circuits. The relationship of passive components when used in simple and complex circuits are analyzed. Ohm's law, Kirchhoff's laws, ammeters, voltmeters, ohmmeters, capacitance, and power are discussed. Magnetism, magnetic induction, inductance and AC principles are introduced. Hands-on laboratory experience in understanding electrical principles is stressed. Soldering and fabrication techniques are discussed and practiced, culminating with a project fabricated and tested by the student. Pre-requisite MAT 111, pre or co-requisite MAT 131.

ELT 101 Circuits II**4 Credits**

This course is the study of electrical principles and laws pertaining to alternating current and voltage. DC and AC network theorems, j operator, phasors, reactances, impedances, phase relationships, power, resonance, transformers, polyphase and filter circuits are studied. Pre-requisite ELT 100, pre or co-requisite MAT 132 is recommended, but not required.

ELT 103 Digital Principles**3 Credits**

Introduces digital electronics, including logic gates and combinational logic circuits. Studies binary arithmetic, Boolean algebra, mapping techniques, digital encoders and decoders, multiplexers and demultiplexers and arithmetic circuits. Uses SSI and MSI digital integrated circuits. Pre-requisite BSA 032, pre or co-requisite BSA 025, MAT 111.

ELT 105 Solid State I**4 Credits**

Studies characteristics and applications of semiconductor devices and circuits. Covers signal and rectifying diodes, bipolar transistors, rectification, single and multistage amplifiers, AC/DC load lines, biasing techniques, equivalent circuits and power amplifiers. Pre or co-requisite ELT 101.

ELT 106 Digital Applications**4 Credits**

Offers advanced study of digital systems, including memory and D/A and A/D conversion. Covers construction of specified timing circuits, design driver/display systems, selected register design, counters and arithmetic circuits and validation of operation. Studies hardware and general microprocessor system organization. Pre or co-requisite ELT 101.

ELT 201 Solid State II**4 Credits**

Studies applications of special-purpose diodes, thyristors and unipolar transistors. Discusses frequency effects and response of amplifiers. Includes discrete SCRs, UJTs, FETs, oscillators, linear regulated power supplies, switching regulators and power amplifiers. Introduces op-amps. Pre-requisite ELT 105, pre or co-requisite ELT 288.01.

ELT 202 Microprocessors**4 Credits**

Introduces microprocessor system organization, operation, design, troubleshooting and programming. Investigates and analyzes a microprocessor instruction set for its operation. Includes programming and interfacing a microprocessor. Pre-requisite ELT 105, pre or co-requisite ELT 288.01.

ELT 203 Introduction to Industrial Controls**3 Credits**

An overview of electronics as applied in the industrial setting. Introduction to various applications of industrial systems and how electronics is applied to these systems. Introduces power electronics, ladder logic, digital control, DC power supplies, SCRs and other thyristors. Variable speed control for DC and AC motors will be covered. Standby power supplies will be introduced. Pre-requisite ELT 106 and 223, pre or co-requisite ELT 201 and 288.01

ELT 214 Industrial Instrumentation**3 Credits**

This is a hands-on, intensive lecture/lab course which emphasizes precision measurement via temperature, pressure, strain, pH, force, flow and level gauges. Instruction will cover the related probes, sensors, transducers, computer interfaces, computer hardware and peripherals, and computer software necessary for the acquisition, summarization, analysis and presentation of data. Process control for temperature, pressure, flow and level will be introduced. Pre-requisite ELT 201 and ELT 288.01.

ELT 223 Electrical Machines**3 Credits**

Provides an overview of electrical machines and how they relate to industrial electronics. Gives industrial electronics technicians insight into electrical power generation, polyphase system, transformers, all types of electrical motors, power factor and power factor correction, back-up power and electrical power monitoring. Pre-requisite ELT 101.

ELT 227 Peripherals**3 Credits**

Studies peripherals and their interfacing with computers and microcomputers. Includes a study of data communications hardware and techniques. Studies the design of circuits to interface microprocessors with industrial equipment. Includes microcomputer systems interfacing with input and output transducers for control systems. Studies techniques for logical troubleshooting of microcomputer systems. Pre-requisite TEC 104, ELT 105 and 106, pre or co-requisite ELT 202.

ELT 228 Communications Electronics**3 Credits**

Analyzes communication circuits with emphasis on AM, FM, SSB and stereo transmitter and receiver systems. Includes noise, modulation and demodulation principles, phase-locked loop, RF amplifiers, automatic gain control, detectors, limiters and discriminators. Offers hands-on lab exposure to analog circuits utilizing analysis and troubleshooting techniques. Pre-requisite ELT 105, pre or co-requisite ELT 201 and 288.01.

ELT 229 Telecommunications**3 Credits**

Examines various methods in transmitting digital data from one location to another. Covers time and frequency division multiplexing. Includes pulse-code and delta modulation, telemetry, error detection and correction and simple networks. Covers techniques for logical troubleshooting of telephonic systems. Pre-requisite TEC 104, ELT 105 and 106, pre or co-requisite ELT 202.

ELT 230 Advanced Communications Electronics**3 Credits**

Introduces antenna principles and wave propagation and an in-depth study of matching techniques for transmission lines. Includes the Smith Chart and a thorough study of television operation. Measures radiation patterns with different antenna arrays. Practices digital and analog troubleshooting and signal tracing techniques. Pre-requisite MAT 132, ELT 228.

ELT 231 Microwave Communications**3 Credits**

This course will include an overview of microwave transmission lines, waveguide components and systems. To include satellite earth stations, microwave relay systems and radar. Optic fibers and lasers as they relate to microwave, will also be covered. Pre-requisite MAT 132, ELT 228.

ELT 280 Co-op/Internship**1-6 Credits**

Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

ELT 281-293 Special Topics in Electronics Technology**1-5 Credits**

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area.

1 Credit

Introduction to Operational Amplifiers (Op Amps), characteristics and operations. Covers inverting and noninverting amplifiers, differential amplifiers, waveform generation, linear regulators, switching regulators and voltage comparators.

ENV 104 Plant Operations—Sanitary**3 Credits**

Provides the basic principles of aerobic and anaerobic biological treatment processes, including activated sludge, trickling filters, lagoons, sludge handling and disinfection. Reviews state and federal regulations related to wastewater plants.

ENV 208 Plant Operations—Industrial

3 Credits

Covers wastewater treatment processes including coagulation, sedimentation, activated sludge, neutralization, equalization, cyanide and chromate removal. Presents instrumentation, maintenance and troubleshooting. Includes operations, laboratory testing and associated mathematics.

FST 104 Food Production, Methods, and Procedures**3 Credits**

Provides study of and application of food production methods and procedures with an emphasis on soups, sauces and gravies.

FST 105 Quality Service Standards**3 Credits**

Provides students with techniques of serving, bussing and cashiering in dining operations.

FST 106 Application of Food Service Production I

3 Credits

Provides the knowledge and applications of the principles of pantry production, baking, vegetable and fruit preparation, pastries and breakfast cookery.

FST 108 Application of Food Service Production II**3 Credits**

Provides knowledge and application of production methods and procedures for meat, seafood, poultry, dairy products and hot hors d'oeuvres.

FST 109 Computer Food Service Spreadsheets

3 Credits

Introduces microcomputers and specific food service applications. Covers basic procedures for food service spreadsheet applications involving analysis and reporting using Lotus 1-2-3 or compatible software.

HEA 101 Heating Fundamentals

3 Credits

Introduces fundamentals applicable to the heating phase of air conditioning. Includes types of units, parts, basic controls, functions and applications. Emphasizes practices, tools and meter uses, temperature measurement, heat flow, and tubing installation and connecting practices.

HEA 103 Refrigeration I

3 Credits

Introduces compression systems used in mechanical refrigeration, including the refrigeration cycle and reinforcements. Introduces safety procedures and proper uses of tools used to install and service refrigeration equipment.

HEA 104 Heating Service

3 Credits

Covers procedures used to analyze mechanical and electrical problems encountered when servicing heating systems, including gas, oil, electric and hydronic heating equipment. Considers electrical schematic and diagrams, combustion testing, venting and combustion air requirements, installation and service procedures.

HEA 106 Refrigeration II

3 Credits

Continues Refrigeration I with further study of basic system components and an introduction to troubleshooting procedures. Includes clean-up procedures following compressor burn-out and analysis of how a single problem affects the rest of the system.

HEA 107 Duct Fabrication & Installation

3 Credits

Emphasizes reading blueprints common to the sheet metal trade, floor plans, elevations, section, detail and mechanical plans. Requires students to develop a layout of an air conditioning system, layout of duct work and fittings and fabrication of these parts, including proper use of hand-tools and shop equipment used to fabricate duct work and fittings.

HEA 201 Cooling Service

3 Credits

Covers procedures used to diagnose electrical control problems found in residential air conditioning and refrigeration systems, including 24-volt and line voltage controls such as defrost timers, defrost heaters, relays and cold controls with emphasis on schematic and pictorial diagrams.

HEA 202 Electrical Circuits & Controls

3 Credits

Studies various kinds of heating, air conditioning and refrigeration controls. Includes gas, oil, cooling and electric heat controls, thermostats and other kinds of variable controls such as humidistats, aquastats and electronic thermostats and temperature controls. Covers operation of controls and how they are integrated into complex systems by using schematic and pictorial diagrams. Presents component troubleshooting and testing.

HEA 203 Heat Loss and Gain Calculation

3 Credits

Covers methods used in calculating building envelop heat loss and heat gain in sizing units for residential and light commercial application. Discusses building construction techniques and energy consumption reduction methods.

HEA 204 Commercial Refrigeration

3 Credits

Examines air conditioning and refrigeration systems for commercial use, including medium- and low-temperature applications. Includes refrigeration accessories, metering devices and advance control arrangements.

HEA 205 Heat Pump Systems

3 Credits

Provides an understanding of the different types of heat pumps available for use today. Familiarizes students with the refrigeration cycle as it applies to the heat pump systems. Provides students with the opportunity to draw, trace and follow an electrical schematic of a heat pump with refrigerant. Includes selecting the proper heat pump, recording heat loss and gain calculations for the space available. Provides instruction in mechanical components and in troubleshooting a non-functioning heat pump.

HEA 206 Advanced Cooling Service

3 Credits

Considers methods of troubleshooting electrical and mechanical components of commercial and industrial air conditioning and refrigeration systems.

HEA 207 HVAC Codes

3 Credits

Study of state and local codes covering installation, repair, alteration, relocation, replacement and erection of heating, ventilation, cooling and refrigeration systems. Includes mechanical, electrical, gas, venting and plumbing codes.

HEA 209 Psychrometrics/Air Distribution**3 Credits**

Studies the properties of air during the operational variations of temperature and humidity. Discusses the atmospheric conditions and the impact of those conditions on the heating-cooling processes and the design of systems for residential and commercial structures. Includes the sizing and configurations of air delivery duct systems and system design methods.

HEA 212 Advanced HVAC Controls**3 Credits**

Covers control systems beyond ordinary residential and single zone commercial applications. Includes solid state controls, zoning controls, modulating controls, low ambient controls, heat recovery and energy management controls, economizer controls and pneumatic controls.

HEA 213 Sales and Service Management**3 Credits**

Encompasses the use of blueprints, specifications, AIA documents, application data sheets, bid forms and contracts in estimating materials and labor in the HVAC business. Includes advertising, direct labor, indirect labor, overhead, warranty overages, taxes, permits, subcontracts, margins, mark-ups and profit. Provides students with the opportunity to estimate service contracts and study service organization, service procedures, record keeping, parts inventory control and insurance liability.

HEA 214 Applied Design**3 Credits**

Provides students with the opportunity to design and lay out a complete HVAC system.

HEA 220 Distribution Systems**3 Credits**

Covers methods used in calculating building envelop heat loss and gain in sizing units for residential and light commercial application. Studies the relationship of air properties to temperature and the design of systems for residential and light commercial structures. Includes the sizing and configurations of air delivery duct systems.

HEA 221 Heat Pumps and Cooling Service**Credits**

Covers procedures used to diagnose electrical control problems found in residential air-to-air, geothermal heat pump and cooling systems, including 24 volt and line voltage controls. Familiarizes students with the refrigeration cycle as it applies to the heat pump. Covers correct charging procedures and sizing of heat pumps. Includes trouble-shooting of heat pumps and cooling systems such as defrost timers, defrost heaters, relays and cold controls with emphasis on schematic and pictorial diagrams.

HHS 101 Medical Terminology**3 Credits**

Addresses basic terminology required of the allied health professional. Presents Greek and Latin prefixes, as well as suffixes, word roots and combining forms. Emphasizes forming a solid foundation for a medical vocabulary including meaning, spelling and pronunciation. Includes medical abbreviations, signs and symbols.

HHS 102 Medical Law and Ethics**2 Credits**

Presents ethics of medicine and medical practice, as well as legal requirements and implications for allied health professions.

HHS 103 Dosage Calculation**1 Credit**

Introduces the mathematical concepts required of the allied health professional to accurately administer medications.

HHS 104 CPR and Basic Health Awareness**1 Credit**

Provides students with information necessary to recognize the need for one and two person cardiopulmonary resuscitation (CPR) as it relates to adults, children and infants. Requires students to safely perform CPR.

HMS 101 Introduction to Human Services

3 Credits

Explores the history of human services, career opportunities and the role of the human service worker. Focuses on target populations and community agencies designed to meet the need of various populations.

HMS 102 Helping Relationship Techniques

3 Credits

Examines the helping process in terms of skills, helping stages and issues involved in a helping relationship. Introduces major theories of helping.

HMS 103 Interviewing and Assessment

3 Credits

Develops skills in interviewing and provides a base for students to build personal styles. Introduces a variety of assessment approaches and treatment planning. Utilizes case studies and recording exercises.

HMS 104 Crisis Intervention

3 Credits

Provides beginning training for individuals presently working with people in crisis situations or planning to do so.

HMS 105 Criminal Justice Systems

3 Credits

Introduces the study of crime and criminals and how society is affected.

HMS 106 Physiology of Aging

3 Credits

Focuses on the physical changes and common pathologies associated with the aging process. Includes the psychological and social implications of changes for human behavior. Focuses on health promotion and disease prevention.

HMS 107 Human Services Topical Seminar

3 Credits

Discusses topics of current interest in human services. Focuses on special interest projects for students in human services. Utilizes field trips, guest speakers, audio-visual activities and seminars.

HMS 108 Psychology of Aging

3 Credits

Covers the major behavioral changes in adulthood and aging.

HMS 109 Families in American Culture

3 Credits

Covers the impact of change on the role and function of the modern family, the nature of the socialization process and socio-economic, cultural and ethnic factors that nurture or inhibit the family's capacity to function.

HMS 111 L.T.C. Activity Director

3 Credits

Explores the philosophy and investigates the development of therapeutic activity programs for residents living in nursing homes. Focuses on offering activities which meet an individual's physical, social and emotional needs.

HMS 112 Recreation for Special Populations

3 Credits

Studies the nature and etiology of impairments including developmental disabilities, mental illness, physical disabilities and geriatrics and their potential impact upon an individual's ability to participate in recreational activities. Explores techniques needed to conduct a recreation program which allows successful participation by an individual with a disability.

3 Credits

Provides basic information about alcohol and drugs and the laws which pertain to their abuse. Explores current attitudes and practices which pertain to alcohol and drug use, misuses and dependence.

3 Credits

Provides practical and useful information about aging and institutionalization. Focuses on the role of social services within the long-term care facility.

3 Credits

Studies the unique capacities and personal strengths of self and others. Emphasizes discovering, clarifying and affirming individual potential for living more fully. Discusses the complex nature of human development, human behavior and related social problems.

3 Credits

Explores the history of health care provided outside the home and offers an overview of long-term health care facilities. Includes rules and regulations of nursing homes, resident rights, legislation and physical plant requirements.

3 Credits

Explores principles and relationships of the interdisciplinary team, the various departments which may compose the team and the services each department provides.

3 Credits

Provides holistic overview of the physical, psychological and social needs of individuals who live in extended care facilities. Examines effective treatment modalities to meet the resident's various needs.

3 Credits

An overview of various issues to familiarize students with responsibilities of nursing home administrators. Management styles, models, quality circles and personal improvements are covered.

3 Credits

Introduces information, skills and attitudes necessary to become an effective worker in residential treatment. Explores basic developmental needs, planning and use of activities, and issues related to the team approach. Discusses and demonstrates observation and recording of behavior.

3 Credits

Covers major theories and patterns of aging in American society. Covers social institutions and cultural factors that affect the aging process.

3 Credits

Provides practical and useful information for anyone who has experienced a loss. Addresses the problems of loss and grief and how to develop coping skills.

HMS 150 Special Population Needs and Activities

3 Credits

Recognizes and utilizes social activities and recreation as a viable form of therapeutic intervention based on the client's limitations or special needs.

HMS 201 Internship 1

4 Credits

Provides field work experience in an approved social, educational, law enforcement, corrections or other community service organization. Requires 14 to 16 hours of work experience each week.

HMS 202 Internship 2

5 Credits

Continues Internship I. Requires 14 to 16 hours of work experience each week.

HMS 203 Internship Seminar 1

3 Credits

Permits small group discussion and analysis of the human services practicum experience. Includes special learning objectives related to the kind of work students do after completing the program.

HMS 204 Internship Seminar 2

3 Credits

Continues Internship Seminar 1 with different learning objectives. Relates objectives to the work the student will do after completion of the program.

HMS 205 Behavioral/Reality Techniques

3 Credits

Focuses on theories of behavioral and reality approaches. Develops understanding of terms and practical applications of the behavioral and reality approaches used in working with people.

HMS 206 Group Process and Skills

3 Credits

Studies group dynamics, issues and behavior. Includes group functioning and leadership, guidelines on working effectively with a co-leader and practical ways of evaluating the group process.

HMS 207 Program Planning/Policy

3 Credits

Deals with the components of administration of human service agencies. Addresses practitioner skills needed by administrators or supervisors. Discusses social policy issues and impact on human services.

HMS 208 Treatment Models of Substance Abuse

3 Credits

Describes the various treatment models used with chemically dependent clients. Discusses intervention and treatment models for chemical dependency and their role in the recovery process.

HMS 209 Counseling Issues

3 Credits

Explores practice strategies for counselors of chemically dependent clients.

HMS 210 Co-dependency

3 Credits

Presents definitions of co-dependency and issues related to it. Teaches skills and techniques to confront co-dependent behavior.

3 Credits

Provides an overview of the concepts, definitions and measurements of juvenile delinquency. Explores various theories which attempt to explain causes of delinquency. Looks at the role of environmental influences (peers, gangs, school, drugs, etc.) contributing to delinquency. Discusses history and philosophy of the juvenile justice system as well as ways to control and treat juvenile delinquents.

3 Credits

Provides an overview of the legal and ethical aspects in the field of human services with implications for the human services worker. Includes liability, confidentiality and privilege, records and rights of clients, due process and equal protection in terms of staff and client, discrimination and witnessing.

3 Credits

Introduces abnormal psychology to acquire skill in understanding personality, attitude and emotional disorders which require intervention.

3 Credits

Provides an understanding of probation and parole as an integral part of the criminal justice system with special emphasis on current and future trends in this area. Explores the role of community corrections and its impact on the role of probation and parole in our society in view of the increase in the number of offenders.

1-5 Credits

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

3 Credits

Provides a study of the U.S. Occupational Safety and Health Administration's (OSHA) regulations which protect workers from exposure to occupational hazards. Concentrates on researching, interpreting, summarizing and applying the OSHA regulations for workers who handle hazardous materials.

3 Credits

Reviews research conducted to determine the systematic health effects of exposures to chemicals. Includes determination of risk factors, routes of entry of hazardous materials and their effects on target organs, acute and chronic effects and control measures.

3 Credits

Provides instruction concerning the development and implementation of a hazard communication program for employees. Provides experience in conducting a chemical inventory, interpreting material safety data sheets (MSDSs), developing a written hazard communication program that complies with 29CFR 1910.1200 and conducting an effective hazard communication training program.

3 Credits

Provides a detailed study of the U.S. Environmental Protection Agency (EPA) regulations pertaining to hazardous waste management, with an emphasis on the requirements of the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA).

3 Credits

Teaches students to develop an emergency response contingency plan for a facility or community. Includes analyzing the hazards, writing and implementing the contingency plans, training employees for an emergency and evaluating the effectiveness of the contingency plan.

3 Credits

Introduces students to a variety of sampling procedures used in industrial settings and for emergency response. Includes sampling and monitoring devices, industrial hygiene monitoring, water and waste stream monitoring, outside air sampling, soil sampling and radiation. Emphasizes collecting and preserving representative samples, interpreting laboratory results and complying with relevant federal regulations.

3 Credits

Provides a detailed study of the U.S. Department of Transportation (DOT) regulations. Introduces certain Nuclear Regulatory Commission and Environmental Protection Agency regulations pertinent to hazardous materials transportation. Includes problems and case studies in which students identify and interpret applicable DOT regulations and recommend compliance strategies. Provides practical understanding of DOT issues through interviews with local professionals in hazardous materials handling.

3 Credits

Explains methods of recovery, incineration and/or disposal of hazardous waste. Includes contracting with qualified disposal organizations, obtaining permits and ensuring regulatory compliance of hazardous waste.

3 Credits

Students develop an understanding of the basic principles of sanitation, safety and first aid (CPR) and are able to apply them in the hospitality operation. This course will also reinforce personal hygiene habits and food handling practices that protect the health of the consumer.

3 Credits

To develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products. Too apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.

3 Credits

This course will enable the student to identify and prepare soups, stocks, sauces and thickening agents.

3 Credits

To develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products. To apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.

3 Credits

Introduces the characteristics, functions, and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will apply the principles of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation.

3 Credits

HOS 106 Pantry and Breakfast**3 Credits****HOS 107 Hospitality Computer Systems**

3 Credits

HOS 108 Table Service

3 Credits

HOS 109 Hospitality Purchasing

2 Credits

HOS 114 Hospitality Organization & Administration

3 Credits

HOS 144 Introduction to Hospitality

3 Credits

HOS 201 Hospitality Organization and Human Resources Management

3 Credits

HOS 202 Garde Manger

3 Credits

HOS 203 Menu, Design and Layout

2 Credits

HOS 204 Food and Beverage Cost Control

2 Credits

Introduces mathematical principles applied to the food service industry and uses skills to complete food related tasks.

HOS 205 Food and Beverage Cost Controls

1 Credit

Covers the principles and procedures involved in an effective system of room, food, beverage, labor and sales income. Emphasizes the development and use of standards in the calculation of cost.

HOS 206 Fundamentals of the Catering Business

3 Credits

Introduces the fundamentals of owning and operating a small catering business including personal, legal and operational requirements.

HOS 207 Classical Pastries and Chocolates

1 Credit

Covers classical French and European desserts. Includes the preparation of goods such as Napoleons, Gateaux St. Honore, petits fours and petits fours sec, ganaches, pastry creams and fillings, sauces, flans and tarts and European sponges. Includes tempering of chocolates, molding and chocolate plastique, preparation of truffles, pastilage and marzipan, short doughs and meringues. Requires students to submit three pieces from the American Culinary Federation approved individual pastry display category to be judged as a final practical exam.

HOS 214 Hospitality Law and Security

3 Credits

Provides an awareness of the rights and responsibilities that the law grants to or imposes upon a hotel keeper. Illustrates the possible consequences of failure to satisfy legal obligations.

HOS 216 Hospitality Marketing and Sales

3 Credits

Presents a practical understanding of the operating statement and precisely where, how and why the sales effort fits into total earnings and profit. Teaches how to measure and gauge accurately the precise worth of every type of business in advance.

HOS 221 Catering

3 Credits

Provides instruction in the fundamentals of catering, including the business of supplying food, goods and organized service for public and private functions. Includes staffing, equipment, transportation, contracting, special arrangements, beverage service and menu planning. Demonstrates techniques of setting up banquets and buffets. Requires students to plan, budget, cost, test recipes and formats, plan decor, service and entertainment for catered events.

HOS 280 Co-op/Internship

1-6 Credits

Requires students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

HOS 281-293 Special Topics in Hospitality Administration

1-5 Credits

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

HRM 107 Organization and Human Resources Development

3 Credits

This course presents the student with opportunities to demonstrate problem solving abilities and techniques in common business and industry settings. Case histories and in-basket situations are used to train, demonstrate, and evaluate decisions common to management positions.

HRM 203 Practicum**3 Credits**

Offers practical work experience in a commercial food service or hotel establishment in order to build specialized skills. Practicum will look at technical and management skills. An agreement must be completed by the student, the establishment and the practice coordinator prior to the start of the course. Students should have a site in mind prior to registering for this course (coordinator will assist).

HRM 204 Food and Beverage Management**3 Credits**

Presents principles and practices of food and beverage production and service. Discusses management philosophies regarding sanitation, menu planning, cost and labor control, employee training, purchasing and merchandising of food and beverage.

HRM 205 Front Office**3 Credits**

A systematic approach to front office procedures, detailing the flow of business through a hotel beginning with the reservation process and ending with billing and collection procedures within the context of the overall operation of a hotel. Examines front office management, the process of handling complaints, and concerns regarding hotel safety and security.

HRM 206 Supervisory Housekeeping**3 Credits**

Introduces the fundamentals of housekeeping management. Emphasis is placed on employee training, record-keeping, health and safety cost control, and overall responsibilities.

HRM 211 Financial Management**3 Credits**

Applies accounting principles to the hospitality industry. Includes business principles pertaining to food and lodging, methods of recordkeeping for creditors, owners, and government and payroll control. Emphasizes tax laws specific to the industry, expense control and techniques of profitable management.

IDS 102 Introduction to Print Reading**3 Credits**

Provides an introduction to reading and interpreting machine shop symbols, welding blueprints and working drawings used in trades and crafts. Focuses on dimension, shape, fabrication and assembly. Applies basic mathematics to the solution of print and performance problems.

IDS 103 Motors and Motor Controls**3 Credits**

Provides a complete understanding of all types of electric motors, extending from the small shaded pole fan motors to the large three-phase motors. Includes motor theory magnetism and how it affects motor rotation. Provides in-depth study of motor starting components and protective devices for motor circuits. Includes heat dissipation from a motor, motor slippage, how motors are wired to obtain different speeds, and capacitors and how they affect a motor circuit.

IDS 104 Fluid Power Basics**3 Credits**

Introduces the student to fluid power principles and components. Teaches basic circuit design, symbols and schematic diagrams to build a foundation for career work in fluid power technology.

IDS 114 Introductory Welding**3 Credits**

Provides basic skills and fundamental knowledge in oxyacetylene and shielded metal welding for maintenance welders, auto service and body technicians, and individuals in the mining industry. Emphasizes industry welding practices and detailed study of techniques used in all weld positions. Covers brazing and flame cutting and electrode selection and uses. Emphasizes safe practices in welding, cutting and shielded metal arc.

IDS 281-293 Special Topics in Industrial Technology

1-5 Credits

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ILT 101 Industrial Laboratory Techniques

3 Credits

Deals with basic skills needed in the industrial laboratory such as safety, identification, care and operation of basic laboratory equipment including pH meters, spectrophotometers, glassware and definition and preparation of reagents. Includes laboratory exercises in the use of selected equipment.

ILT 201 Industrial Instrumentation and Techniques I

3 Credits

Addresses theoretical aspects of industrial laboratory instrumentation, including gas and liquid chromatography (GC and LC), high performance liquid chromatography (HPLC), infra-red (IR) spectrophotometry and atomic absorption (AA). Presents theories and laws that govern the way instruments operate. Includes student experimentation on various analytical instruments.

ILT 202 Industrial Instrumentation and Techniques II

3 Credits

Continues the theoretical study of ILT 201 by addressing industrial applications of laboratory instrumentation, including gas and liquid chromatography (GC and LC), high performance liquid chromatography (HPLC), infra-red (IR) spectrophotometry and atomic absorption (AA). Presents automation techniques, including sampling, data collection and analysis. Covers the laws that govern the way instruments operate. Includes student experimentation on various analytical instruments.

ILT 288.01 Advanced Municipal Wastewater Treatment

3 Credits

The basics of municipal wastewater treatment are briefly reviewed and then study continues on the special processes of advanced wastewater treatment. Emphasis is placed on ammonia and phosphorus removal, process control, filtration, disinfection, and coagulation. This course is excellent preparation for any student desiring to take Indiana's wastewater treatment certification test at the 2, 3, or 4 level. The state usually offers the test in May and November of each year.

ILT 288.02 Special Topics in Environmental Monitoring

3 Credits

The United States Environmental Protection Agency (USEPA) and other governmental and non-governmental organizations are interested in protecting the ecosystems of the earth from harmful changes and enhancing those ecosystems in terms of future growth. Because manufacturing and industrial service companies use water, air, and a variety of other chemical compounds in their processes, the potential exists for dangerous materials being produced and then released into the environment so that humans, animals, plants, and non-living substances are altered in negative ways.

IMT 105 Heating and Air Conditioning

3 Credits

Presents fundamentals of heating and compression systems used in mechanical refrigeration and air conditioning. Includes combustion process, heat flow, temperature measurement, gas laws, heating and refrigeration cycles and components used in systems. Introduces basic mechanical service procedures used in industry.

IMT 106 Millwright I

3 Credits

Introduces the proper use of hand and power tools and measuring instruments in carpentry, blacksmithing, rigging and equipment, machinist and general shop. Includes structural steel and fabricating terms.

IMT 107 Preventive Maintenance

3 Credits

Focuses on detecting and correcting potential trouble spots and scheduling routine inspections with check lists. Studies five essential forms of preventive maintenance: equipment record, checklist, inspection schedule, inspection report and equipment cost record.

IMT 108 Measurements and Calibration**3 Credits**

Provides instruction in the purpose, function and application of oscilloscopes and related instruments.

IMT 122 Electrical Wiring Fundamentals**3 Credits**

Covers National Electrical Code and its relationship to residential and commercial wiring. Includes mechanical installation of hardware, metering equipment, lights, switches and design. Discusses tool use and materials selection.

IMT 201 Fluid Power Systems**3 Credits**

Introduces the student to more complex fluid power circuits. Requires students to design, analyze and troubleshoot complex circuits using schematic diagrams. Studies detailed construction of typical industrial fluid power components. Teaches students to disassemble and evaluate fluid power components in the lab.

IMT 203 Machine Maintenance/Installation**3 Credits**

Examines procedures for the removal, repair and installation of machine components. Analyzes methods of installation, lubrication practices and maintenance procedures for industrial machinery. Presents techniques for calibration and repair of electro-mechanical devices and practice in computations pertaining to industrial machinery.

IMT 205 Programmable Controllers I**3 Credits**

Introduces the basic theory, operation and programming of programmable controllers. Includes pilot control devices, circuit layouts, industrial schematics, relay logic, reduced voltage starters and multi-speed controllers. Covers static control systems. Demonstrates with programming examples, set-up examples and troubleshooting, as well as PLC timing, counting, arithmetic and logic.

IMT 206 Programmable Controllers II**3 Credits**

Provides an in-depth study of programmable controllers. Emphasizes program language installation, maintenance and applications.

IMT 207 Electrical Circuits**3 Credits**

Provides fundamentals of single- and three-phase alternating current, including parallel circuits, resistance, inductance, capacitance, switching, fusing, current requirements, transformer applications and motors and motor controls. Covers the basics of mechanical and electrical installations, emphasizes tool use and material selection, and electrical troubleshooting diagnosis and repair.

IMT 210 Pumps**3 Credits**

Covers the construction and operation of centrifugal, reciprocating and rotary pumps and their components. Includes procedures of troubleshooting, installation and maintenance.

LEG 101 Introduction to Paralegal Studies**3 Credits**

Introduces the student to the general concepts of the legal and paralegal fields. Topics include the American legal system, legal analysis, the legal profession and the paralegal's role in the provision of legal services, legal terminology, law office ethics and the Code of Professional Conduct.

LEG 102 Research and Writing**3 Credits**

The study and use of legal research tools such as digests, loose leaf services, reporters, statutory compilations and form books. Legal writing format and methodology are presented through practical application in drafting memoranda and correspondence. Shepardizing and proper case citation skills are emphasized.

LEG 103 Civil Procedures**3 Credits**

A study of Indiana Trial Rules and miscellaneous local rules. Filing requirements, computation of time and form drafting are emphasized.

LEG 104 Torts**3 Credits**

A survey of intentional torts, negligence and strict liability. Emphasizes the elements of tort causes of action and the rules of damages.

LEG 105 Business Associations**3 Credits**

The study of various business structures and the rights, duties, liabilities and formalities attendant to such structures. A survey of partnership, agency and corporation law is included.

LEG 106 Claims Investigation

3 Credits

The study of witness interview techniques, preservation of evidence, organizational skills and alternative methods of gathering facts. Client intake procedure and communication skills are emphasized.

LEG 107 Contracts and Commercial Law

3 Credits

A survey of contract law and the Uniform Commercial Code. Special statutes regarding state unfair practices, consumer deception and consumer rights are also presented.

LEG 108 Property Law**3 Credits**

A survey of the law of real estate and personal property. Provides practical exposure to title searches, loan documentation, zoning requirements, financing statements, leases and deeds.

LEG 109 Family Law

3 Credits

A survey of the law of marriage, dissolution of marriage, custody, child support and visitation, and adoption. Financial declaration forms, client intake skills, Child Support Guidelines and available social services are presented.

LEG 110 Wills, Trusts, and Probates**3 Credits**

Survey of the law of estates, wills, probate and guardianship, as well as intestate succession. Preparation of probate and administration forms, asset inventories and valuation, certain tax forms and accounting are included.

LEG 111 Criminal Law and Procedures**3 Credits**

Survey of Indiana criminal statutes and selected federal criminal laws. Investigative and administrative skills are emphasized.

LEG 112 Bankruptcy Law**3 Credits**

Bankruptcy Law includes a survey of the Federal Bankruptcy Act. Emphasizes skills needed to accumulate person financial information, compile initial schedules, collect and organize data for first meeting of creditors, complete proofs of claim and pursue creditor's rights.

LEG 202 Litigation**3 Credits**

Litigation includes the study of the Indiana Rules pertaining to actual trial. The discovery process and its tools are reviewed. Skills such as document organization and retrieval, witness statement and deposition summarizing, indexing and scheduling are presented. The Federal Rules of Evidence are surveyed. Trial notebook preparation is utilized for practical experience. Prerequisites are LEG 102 and 103.

LEG 203 Law Office Management and Technology**3 Credits**

A survey of software support available to the law practitioner such as litigation support and estate planning support. The course also includes a comparative study of the manual systems for similar procedures, such as docket and conflict control, file organization, research organization, and handling of client funds. Also includes instruction on availability and use of research databases such as Dialog, Nexis, Lexis, and Westlaw. Pre-requisites LEG 102, and CIS 101 or equivalent.

LEG 204 Advanced Legal Writing**3 Credits**

Develops and enhances legal writing abilities with a focus on the relationship of legal writing to the legal process and the basics of technical writing with emphasis on the theoretical and practical applications of legal communications.

LEG 280 Co-op/Internship**1-6 Credits**

Requires students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

LEG 281-293 Special Topics in Paralegal**1-5 Credits**

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

LOG 101 Introduction to Materials Management**3 Credits**

Studies factors influencing the flow of materials in a manufacturing enterprise. Covers basics of production planning and control, purchasing, forecasting, inventory and distribution issues. Concludes with an overview of just-in-time theory and practices.

LOG 102 Manufacturing**3 Credits**

Introductory manufacturing course. Focuses on basic principles, practices and functions of manufacturing management. Includes applications in the service industries, such as utilities, hospitals and government.

LOG 103 Marketing**3 Credits**

Introductory marketing course. Focus is on basic marketing strategy for targeting markets and developing a marketing mix of product, price, distribution and promotion.

LOG 201 Transportation Systems**3 Credits**

Provides in-depth knowledge of transportation systems and their inter-relationships with our economic, social, political and environmental systems.

LOG 202 Physical Distribution

3 Credits

Focuses on the major concepts and rationale for utilizing warehouse inventories to lower costs of transportation, improve customer service, avoid stockouts, improve purchasing economics and seasonal variability.

LOG 203 Sales Service

3 Credits

Designed to develop the art of selling. Sales knowledge and sales skills are applied to choices of products. Selling principles and the order processing cycle are emphasized.

LOG 204 Case Studies

3 Credits

Uses the case study method to apply the knowledge, principles and skills acquired in student programs.

LOG 208 Distribution Center Management

3 Credits

Studies warehousing from a depositor and operator viewpoint. Includes warehousing functions, location and specific site criteria, labor productivity, cost controls, equipment and packaging and customer service.

LOG 209 Export/Import I

3 Credits

Studies the practical application of export and import techniques and concepts, government regulations, documentation, and financial and transportation considerations of the movement of commerce from and to the United States.

LOG 210 Export/Import II

3 Credits

Familiarizes students with import practices, governmental regulations and carrier rate-making practices. Requires students to complete practical exercises, solve importing problems and work with the tariff schedule of the United States.

LOG 211 Transportation Pricing

3 Credits

Provides students with skills and techniques related to transportation pricing. Includes introduction, training and practice in freight management, freight classification, tariff interpretation and selection, zip code pricing and contract and negotiations.

LOG 212 Freight Loss and Damage Claims

3 Credits

Covers appropriate methods for claims management, damage claims prevention, legal remedies for disputed claims and transportation regulations.

MEA 102 First Aid and CPR

2 Credits

Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid, including CPR.

MEA 113 Pharmacology

3 Credits

Discusses the most common medications in current use with emphasis on classifications, uses, routes of administration, dosages, interactions, incompatibilities and side effects. Emphasizes the 50 most commonly prescribed drugs listed in *Pharmacy Times*. Addresses special precautions, legal aspects, patient education and preparation and administration of medications.

MEA 114 Medical Assisting Laboratory Techniques

3 Credits

Prepares student to perform various basic laboratory procedures, including preparation of patients, collecting and preparing appropriate specimens and expected norms of laboratory test results. Includes current safety and quality control standards.

MEA 115 Medical Insurance

2 Credits

Provides an overview of medical insurance programs and skills developed in handling insurance forms, CPT and ICD-9-CM Coding and reports as applied to the medical office.

MEA 120 Medical Assisting Clinical Externship

3 Credits

Provides the opportunity to discuss and perform clinical procedures under supervision, with learning experiences obtained in selected physicians' offices, clinics or hospitals.

MEA 121 Medical Assisting Administrative Externship

3 Credits

Provides opportunities to observe, perform and discuss various administrative competencies under supervision, with learning experiences obtained in selected physicians' offices, clinics or hospitals.

MEA 130 Medical Office Administration

2 Credits

Provides an understanding of the administrative duties and responsibilities pertinent to medical offices. Develops communications skills specifically directed toward a medical office and the role of the professional medical assistant as a member of the health care team. Includes instruction in medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties and processing mail. Includes development of desirable personality traits, inter-personal relationships and attitudes within the medical office.

MEA 131 Medical Financial Management

3 Credits

Provides instruction in medical office financial administration, bookkeeping and materials management.

MEA 132 Computer Concepts in Medical Office

2 Credits

Familiarizes students with computer applications in the health care setting. Provides students with basics of operations and applications of computer usages within the health care provider office. Includes simulated data entry for patient records, procedures and diagnostic codes, insurance processing and electronic transmission of claims and scheduling day-sheet transactions in accordance with the AAMA DACUM guidelines.

MEA 133 Medical Assisting Clinical Theory

3 Credits

Presents theory related to clinical aspects of the medical office. Includes theory related to vital signs, asepsis, sterilization, medication administration, EKG's, X-ray, nutrition, physical therapy and other skills needed to assist the physician in the clinical setting.

MEA 134 Medical Assisting - Clinical Skills Lab

2 Credits

Allows students to become familiar with clinical duties and gain the skills needed to perform them. Includes vital signs, asepsis, sterilization, medications, EKGs, X-ray, nutrition, physical therapy and other technical skills needed to assist the physician.

MEA 135 Medical Typing and Transcription

3 Credits

Develops skills and knowledge of medical dictation, machine transcription, and use of word processors and typewriters. Includes typing and transcription of medical reports, terminology and correspondence.

MEA 151 Pharmacy Technician I**3 Credits**

Introduces basic skills and information needed to qualify as a Pharmacy Technician in the state of Indiana.

MEA 152 Pharmacy Technician II**3 Credits**

Theory is applied through performance of competency levels of the technical pharmacy task including: properly preparing, documenting and processing prescriptions according to pharmacy policy and regulations; preparing intravenous and special solutions; properly preparing and maintaining records appropriate to the pharmacy, including quality control records, controlled substances (narcotic drug distribution), prescription data and records; applying basic principles of microbiology, using aseptic techniques and operating and maintaining the laminar hood. The student will employ proper communication skills (both written and verbal). Identification and adherence to check points will be emphasized. Current national and Indiana Law and administrative rules as they relate to the practice of the pharmacy technician will be presented. The importance of adherence to universal precautions will be discussed.

MEA 153 Administrative Aspects of Pharmacy Technology**2 Credits**

Addresses the administrative aspect of pharmacy technology, including professional development, professional communication, time management, record keeping, computer applications, third party payment processing, operation of business machines and utilization of reference material.

MEA 154 Pharmacy Externship**2 Credits**

Provides the opportunity to discuss and perform clinical procedures under supervision, with learning experiences obtained in selected retail pharmacies and/or hospitals.

MEA 203 Disease Conditions**3 Credits**

Presents the basic concepts of diseases, their courses and functional disturbances as they relate to body systems. Includes the precipitating risk factors and appropriate methods of patient education regarding various disease processes.

MEA 209 Electrocardiograph - Basic Technique**1 Credit**

Presents the basic reasons for prescribing an electrocardiograph and the theory involved. The physiological principles involved are the basis for proper techniques that will be practiced by the students until they demonstrate competency with both the theory and required skills in doing a prescribed electrocardiograph.

MEA 210 Introduction to EKG Interpretation**2 Credits**

Includes anatomy and physiology of the cardiovascular system and recognition of basic arrhythmias. Measurement of the EKG complex will be taught with the emphasis placed upon determining heart rates and rhythms.

MEA 211 Advanced Electrocardiograph Interpretation**3 Credits**

Includes anatomy and physiology of the cardiovascular system, interpretation of rhythm strips and 12 lead EKG's and the cardiovascular drugs associated with arrhythmias.

MEA 212 Phlebotomy**3 Credits**

Presents the principles and practices of laboratory specimen collection and processing. Also covers medical terminology, infection control, patient identification, anatomy and physiology, anticoagulants, blood collection, specimen processing and interpersonal skills.

3 Credits

Introduces the medical office administrator codes necessary to bill insurance claims and provides experience in coding claim forms using the correct combination of codes to maximize reimbursement.

MEA 214 Advanced First Aid and CPR**3 Credits**

Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Handling of victims of hazardous materials accidents will be addressed. Covers CPR, including one and two rescuer. Teaches adult, infant, and child resuscitation.

MEA 215 Advanced Medical Terminology**3 Credits**

Includes more detailed and advanced study of the derivatives of medical terms, symbols and signs. Presents an in-depth study of the correlation between medical vocabulary and the application of those terms to the anatomy and physiology of the body, related diseases, conditions and treatment.

MEA 216 Nutrition

2 Credits

Presents the importance of a balanced diet; methods of evaluating a diet; the basic four food groups; the functions, requirements and food sources of fats, proteins, carbohydrates, vitamins, and minerals, and the deficiency diseases. Introduces meal planning, nutrition for various age groups, religious and nationality food habits, and diet therapy. Explains special diets for diabetes, diseases of the GI tract, urinary tract, blood, cardiovascular system, obesity, cancer, allergy and pregnancy.

MEA 217 Gerontology**3 Credits**

Presents a multidisciplinary study of the sociological, psychological and physiological aspects of aging. Included will be patient education and the impact that all facets of aging have on the total person.

MEA 221 Seminar 1

1 Credit

Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the Medical Assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

MEA 222 Seminar 2

2 Credits

Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the Medical Assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

MEA 223 Seminar 3

3 Credits

Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the Medical Assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

MEA 224 Hospital Coding

3 Credits

Designed to build on the comprehensive coding skills acquired through prerequisite course MEA 213. Introduces additional instruction in diagnostic related groups (DRG's) and medical record extraction. Provides discussion, observation and performance opportunities in related insurance coding competencies. Both classroom and clinical sites are utilized to provide realistic experiences under supervision. External sites include physicians' offices, clinics and hospitals.

MEA 225 Insurance Coding Externship

3 Credits

Provides opportunities to observe, perform and discuss various insurance related competencies under supervision, with learning experience obtained in selected physicians' offices, clinics or hospitals.

MEA 226 Medical Assisting - Advanced Clinical Procedures

3 Credits

Advances the knowledge and skills enabling the student to assist in clinical management in the medical and surgical specialties. Addresses health services in the community which are directed toward prevention of disease and maintenance and restoration of health.

MEA 227 Advanced Administrative Procedures

3 Credits

Provides an in-depth study of various influences on office functions concerning organization and management of a physician's office. Includes government and professional sources for consultation.

MEA 228 Ophthalmic Dispensing

3 Credits

Includes the study of frame types and parts, facial measurements for fitting, functional and cosmetic aspects of frame selection and frame alignment, adjusting and repair. Contact lenses, types, care, insertion and removal methods, modifications, polishing, and patient evaluation and education are also covered.

MEA 229 Ophthalmic Procedures

3 Credits

Includes techniques and theory used in optometric/ophthalmic practice. Included are case histories, visual acuity, refractive errors, retinoscopy, tonometry, color vision, eye movements, binocular vision, accommodation, convergence and divergence, visual axis deviation and pupil observation. Also included are hypertension and measurement of blood pressure, diabetes, ocular pathology and pharmacology, biomicroscopy, vision screening, blindness and partial sight, low vision aides and vision therapy.

MEA 230 Structure and Function of the Eye

2 Credits

Familiarizes the student with the structure and function of the human eye. Pathological conditions will also be covered.

MEA 231 Basic Optics

3 Credits

Acquaints the student with basic optical principles. Fundamental properties of lenses and mirrors and how they relate to the correction of visual problems will be discussed. Types of optical defects commonly associated with vision will be covered. The student will be introduced to optometric instrumentation, fundamental soft lens formulas and visual field screening.

MEA 232 Clinical Optometric/Ophthalmic Practicum

2 Credits

This "hands on" field experience allows the student to put into practice, under supervision, skills and knowledge obtained in class and labs.

MEA 233 Health Unit Coordinator

5 Credits

Prepares students to provide reception and clerical support to the nursing unit to facilitate the delivery of nursing care. Students will gain skills in communication methods, problem solving, transcription processes, classification of orders and appropriate documentation procedures.

MEA 234 Phlebotomy Externship

3 Credits

Provides the opportunity to discuss and perform phlebotomy procedures under supervision with learning experiences obtained in selected laboratories, physicians' offices, clinics or hospitals.

3 Credits

Improves accuracy and speed of the medical transcriptionist utilizing various formats for medical transcription.

1-5 Credits

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

3 Credits

Reviews the entire medical assisting program in preparation for the CMA registry examination. Administration, clinical and general information is covered. Testing procedures are addressed. Emphasis will be placed on job readiness and placement. The course will give continuing education units for graduate CMA's in order to fulfill their certification renewal requirements.

3 Credits

Introduces the marketing role in society and how it affects the marketing strategy. Emphasizes the marketing mix, product planning and the effects of the demographic dimension on the consumer market.

3 Credits

Provides an overview of the selling process. Includes the psychology of selling and develops skills through a series of selling situations.

3 Credits

Focuses on advertising as the key element in the promotion of goods and services in the marketplace. Includes advertising media and media selection, advertising copy strategy, advertising regulations and organization of advertising functions.

3 Credits

Study of the basic principles of consumer behavior which offers insight into the buyer-seller relationship. Application of theories from psychology, social psychology, and economics are examined. Course examines concepts that have implications for marketing management decisions.

3 Credits

Presents basic research methods entailing procedures, questionnaire design, data analysis and effectively communicating research results.

3 Credits

Introduces students to the framework of logistics, the logistics environment, customer services and materials management. Introduces material resources planning (MRP) and just-in-time (JIT) principles.

3 Credits

Focuses on the analysis, implementation and control of marketing strategy. Emphasizes the major decisions management faces in its effort to harmonize the objectives and resources of the organization with the needs and opportunities of the marketplace.

3 Credits

Introduces the risks faced by business firms, including property, liability and personal losses, and how they are handled. Presents insurance contracts and their uses. Includes an overview of life insurance, health and pension insurance, public policy, government regulations and social insurance.

MKT 206 Sales Management

3 Credits

Studies the role of the sales manager emphasizing the leadership function. Focuses on building a sales team, judging sales performance, managing territories, sales recruiting and interviewing, training and development and managing the field sales office. Includes sales support and liaison, property, liability and operations.

MKT 207 Public Relations

3 Credits

Provides broad coverage of the public relations field and acquaints students with the role of effective internal and external public relations in business and industry. Examines the goals and benefits of public relations, the tools of the public relations practitioner and the principles and trends of the field.

MKT 219 Field Study/Cooperative Education

3 Credits

Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides field experience within the framework of actual work experience in marketing.

MKT 220 Real Estate Sales

3 Credits

Provides instruction in accordance with the guidelines established by the Indiana Real Estate Commission. Includes property descriptions, marketing real estate, licensing, financing, contract, zoning, closing procedures and property management.

MKT 221 Real Estate Broker

3 Credits

Provides instruction in accordance with the guidelines established by the Indiana Real Estate Commission. Includes property management, appraisal, investment, closing the real estate transaction and other topics.

MLT 101 Fundamentals of Laboratory Technician

3 Credits

Introduces elementary skills required in the medical laboratory. Covers laboratory math, quality control, pipetting skills, veinipuncture techniques and microscope skills.

MLT 102 Routine Analysis Techniques

3 Credits

Studies principles, practices and clinical laboratory techniques associated with routine analysis of urine and other body fluids.

MLT 196 Introduction to Patient Care and Phlebotomy

3 Credits

Introduces the health care delivery system. Provides instruction in specimen collection techniques, infection control and safety, and teaches applications of communications concepts and stress management.

MLT 197 Clinical Phlebotomy Experience

3 Credits

Covers the practice and demonstration of clinical applications of phlebotomy in the clinical setting.

MLT 198 Clinical Phlebotomy Discussion

1 Credit

Develops the professional socialization process necessary to function in a health care setting and reviews routine and special phlebotomy procedures in light of phlebotomist-patient interaction.

MLT 201 Immunology Techniques

3 Credits

Provides students with an understanding of principles of the human immunologic system and experience in routine testing.

MLT 202 Immunohematology Techniques**3 Credits**

Instructs students in practice and procedures used in blood banking in the clinical laboratory.

MLT 203 Instrumentation**2 Credits**

Includes instrumentation theory and practice as applied to electronic equipment and automated systems in the medical laboratory.

MLT 204 Microbiology Techniques**4 Credits**

Instructs students in principles of bacteriology, including gram negative and positive bacilli and cocci, fastidious organisms and an overview of anaerobic and acid-fast bacteria. Includes instruction in the basic laboratory techniques in clinical bacteriology.

MLT 205 Hematology Techniques I**3 Credits**

Presents theory of blood formation and function and routine hematologic procedures with emphasis on differentiation of normal from commonly encountered abnormal blood cells. Includes basic theory of hemostasis and associated routine coagulation procedures. Presents clinicopathologic correlations.

MLT 206 Hematology Techniques II**3 Credits**

Continues the study of principles and procedures in hematology and hemostasis. Introduces procedures beyond those routinely performed. Continues cell differentiation with emphasis on early and less commonly encountered abnormal cells and associated special stains. Includes clinicopathologic correlations.

MLT 207 Chemistry Techniques I**3 Credits**

Presents principles, procedures and clinicopathologic correlations in routine chemical analysis of the blood and other body fluids. Provides laboratory experiences in basic methods selected to develop routine analytical abilities and to promote the ability to recognize sources of error.

MLT 208 Chemistry Techniques II**3 Credits**

Continues the study of principles, procedures and clinicopathologic correlations in the chemical analysis of blood and other body fluids. Introduces procedures beyond those routinely performed in the clinical chemistry laboratory, including clinicopathologic correlations.

MLT 209 Routine Analysis Applications**1 Credit**

Studies clinical applications of routine urine analysis in the hospital laboratory including physical, chemical and microscopic examination of urine.

MLT 210 Hematology Applications**1 Credit**

Studies and practices the principles and techniques of hematology in the hospital laboratory.

MLT 211 Microbiology Applications**4 Credits**

Studies applications and clinical practices of microbiology found in the hospital laboratory.

MLT 212 Immunology Applications**1 Credit**

Studies and practices the clinical application of serology in the hospital laboratory.

MLT 213 **Immunohematology Applications**

3 Credits

Studies and practices the principles and procedures used in blood banking in the hospital laboratory.

MLT 214 Chemistry Application

4 Credits

Studies and practices the analytical aspects of clinical chemistry in the hospital laboratory.

MLT 215 Parasitology and Mycology

1 Credit

Provides study in the isolation, identification, life cycles and disease processes of pathogenic fungi and parasites.

MLT 216 Elementary Organic and Biochemistry

3 Credits

Studies the chemistry of carbon-containing compounds and the biochemistry of lipids, carbohydrates, proteins, nucleic and enzymes. Includes related laboratory procedures.

MLT 217 Advanced Chemistry Technology

1 Credit

Presents principles and techniques of chemistry procedures beyond routine clinical chemistry testing, such as toxicology, endocrinology and inborn errors of metabolism.

MLT 218 Clinical Pathology

3 Credits

Examines various disease conditions, diagnosis, etiologies, clinical symptoms and related laboratory findings.

MLT 280 Co-op/Internship

1-6 Credits

Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

MTT 102 Turning Processes I

3 Credits

Instructs students in shop safety and industrial terminology and provides laboratory experience toward project completion on the conventional lathe.

MTT 103 Milling Processes I

3 Credits

Instructs students in shop safety and industrial terminology and provides laboratory experience towards project completion on the vertical and/or horizontal milling machine.

MTT 104 Machinery Handbook

3 Credits

Explores the intent and use of the machinery handbook. Applies principles and concepts in the machinery handbook to projects in the industry.

MTT 106 Advanced Print Interpretation

3 Credits

Applies mathematics in solving engineering and design-related problems in the areas of die design, fabrication, assembly, special machinery, die casting and molds. Emphasizes GDT tolerancing.

MTT 204 Abrasive Processes I

3 Credits

Provides shop safety, industrial terminology and laboratory experiences on abrasive processing machines. Includes superabrasives technology processes.

MTT 208 CNC Programming I

3 Credits

Introduces two and three axis CNC machining. Develops the theory of programming in the classroom with application of the program accomplished on industry type machines. Studies terminology of coordinates, cutter paths, angle cutting, and linear and circular interpolation.

MTT 209 CNC Programming II

3 Credits

Expands on MTT 208, providing further study in computer-aided numerical control programming. Focuses on canned cycles, loops, macros, thread cycles, drilling and pocket milling cycles.

MTT 210 Interactive CNC

3 Credits

Continues CNC Programming II. Introduces advanced applications of computer-assisted part programming and simulation, language codes set-up and operation, troubleshooting and problem solving in a CNC turning center and CNC matching center. Includes related mathematical skills.

MTT 220 CAD/CAM I

3 Credits

Covers the development of various machine routines. Introduces computer-assisted machining as it relates to automated milling and machining centers. Emphasizes proper programming techniques, control familiarity, file data and machining functions.

NUR 101 Fundamental Nursing Concepts

4 Credits

Introduces the role of the associate degree nurse and the facts, concepts and principles underlying the nursing process. Emphasizes physical and psychosocial assessment. Identifies the components of the program philosophy, conceptual framework and terminal objectives.

NUR 102 Fundamental Nursing Concepts Practicum

4 Credits

Introduces associate degree nursing students to practices of the nursing process in campus and clinical laboratory settings. Develops assessment skills and initiates analyzing, planning, implementing and evaluating therapeutic measures through simulated and actual client care.

NUR 103 Life Cycle Nursing I

4 Credits

Identifies the role of the associate degree nurse in assisting people in meeting their needs from the child-bearing process through adolescence. Uses the nursing process to develop the assessment, analysis, planning, implementation and evaluation of therapeutic measures that promote, maintain and/or restore health.

NUR 104 Life Cycle Nursing I Practicum

4 Credits

Provides campus and clinical laboratory experience to function in the role of the associate degree nursing student in providing care to clients during the child-bearing process through adolescence. Uses the nursing process to promote, maintain and/or restore health while providing quality nursing care.

NUR 105 NLN Mobility Profile I Book 1

5 Credits

Evaluates previous learning and experience to facilitate educational mobility.

NUR 106 Transition to Associate Degree Nursing

5 Credits

Socializes practical nurses into the role of associate degree nurses. Identifies the role of associate degree nurses in assisting people in meeting their needs from the child-bearing process through adolescence. Uses the nursing process to promote, maintain and/or restore health.

NUR 107 Transition to Associate Degree Nursing Practicum

3 Credits

Provides campus and clinical laboratory experience to function as associate degree nursing students in providing care to clients from the child-bearing process through adolescence. Uses the nursing process to provide quality nursing care.

NUR 199 Comprehensive Competency Skill Review

3 Credits

Includes demonstration of specific procedures by faculty or other personnel, student laboratory practice, return demonstration of the specific skill by students and viewing audio visual aids pertinent to the clinical setting.

NUR 201 Life Cycle Nursing II

5 Credits

Examines the role of the associate degree nurse in prioritizing human responses which interfere with basic needs contributing to physical and psychosocial illness. Uses the nursing process to promote, maintain and/or restore health in young to middle-aged clients.

NUR 202 Life Cycle Nursing II Practicum

5 Credits

Provides clinical experience to demonstrate the role of the associate degree nursing student in providing care to clients in the young to middle-aged adult period. Bases nursing skills on identified scientific facts, concepts and principles. Emphasizes decision making and appropriate therapeutic communication.

NUR 203 Life Cycle Nursing III

5 Credits

Examines the role of the associate degree nurse in management and advanced communication concepts which are explored for groups of clients with multiple health care needs. Uses the nursing process to promote, maintain and/or restore health in older adult clients.

NUR 204 Life Cycle Nursing III Practicum

5 Credits

Provides clinical opportunity for demonstration and evaluation of personal effectiveness in fulfilling the role of the associate degree nursing student in assisting older adults in meeting their physical and psychosocial health needs. Provides opportunity to utilize the nursing process incorporating management and advanced communication techniques.

NUR 205 Issues in Nursing

2 Credits

Examines issues and nursing responsibility to meet changing patient needs. Integrates historic aspects, current developments, future trends, improvements in nursing practice, legal/ethical considerations and personal/professional growth.

OTA 101 Foundations of Occupational Therapy

3 Credits

Establishes a philosophical base for subsequent course work by introducing and examining concepts basic to the study of Occupational Therapy Assistant.

OTA 102 Kinesiology

2 Credits

Analyzes human motion with emphasis on the range of motion and muscle strength related to occupational performance.

OTA 103 Medical Conditions in Occupational Therapy

3 Credit

Provides an interdisciplinary approach to the study of physical conditions commonly seen by Occupational Therapists. Includes a survey of the medical or surgical management of these conditions.

OTA 201 Field Work 1-A

1 Credit

Provides clinical observation and practice of the occupational skills and processes presented in previous and current courses in the curriculum. Attendance at weekly seminar is required.

OTA 202 Therapeutic Activities

3 Credits

Provides supervised learning experiences in fiber crafts, ceramics, woodworking, art, design and minor crafts as therapeutic modalities.

OTA 203 Therapeutic Group Activities

3 Credits

Provides experimental learning in the analysis and therapeutic use of a variety of group activities used in Occupational Therapy.

OTA 204 Psychiatric Conditions in Occupational Therapy

2 Credit

Reviews psychiatric disorders including medical management and treatment, clinical team approach, legal issues, nomenclature, clinical descriptions, and etiology.

OTA 205 COTA in Physical Health

3 Credits

Presents assistant -level techniques for management of clinical physical dysfunction cases referred to occupational therapy. Includes initial screening, evaluation, treatment planning and implementation of program for patients /clients.

OTA 206 Assistive Technology and Adaptive Equipment

2 Credits

Provides supervised learning experience in the application of technology in Occupational Therapy including orthotics, prosthetics, and assistive/adaptive equipment.

OTA 207 Daily Living Skills

3 Credit

Provides supervised learning experiences in maximizing occupational performance that includes independent living skills, work, and plan/leisure skills.

OTA 208 COTA and Interactive Model

3 Credits

Presents the COTA's role in directing activities in a non-medical setting. Includes appropriate techniques for a variety of populations in settings such as schools, nursing homes, and sheltered workshops.

OTA 209 Field Work 1-B

1 Credits

Provides for clinical observation and practice of the occupational skills and processes presented in previous and current courses in the curriculum.

OTA 210 COTA in Mental Health

3 Credits

Presents the psychiatric Occupational Therapy process and the role of the Occupational Therapy Assistant in appropriate methods and techniques.

OTA 211 Clinical Transition and Management

4 Credits

Presents basic theory, techniques and skills necessary for the transition into the clinical setting and for the management of an activities program. Management information as it relates to the role of the COTA is provided along with examining the qualities necessary for success in the clinical setting.

OTA 212 Field Work 2-A

4 Credits

Provides supervised clinical experience.

OTA 213 Fieldwork Level 2-B

4 Credits

Provides supervised clinical experience.

PNU 101 Foundations of Nursing

4 Credits

Presents the goals and the role of the licensed practical nurse on the health care team. Covers concept of the nursing process as practiced within the wellness/illness continuum. Includes basic nursing care, and data collection and recording.

PNU 102 Therapeutic Measures

3 Credits

Focuses on preventive, therapeutic and rehabilitative nursing interventions requiring advanced skills and knowledge. Integrates the nursing process and the role of the practical nurse.

PNU 103 Holistic Approach to Health

2 Credits

Introduces the holistic approach to practical nursing. Includes holistic aspects of care, the wellness/illness continuum and therapeutic relationships.

PNU 104 Nutrition

2 Credits

Covers basic principles of nutrition and diet therapy in wellness and illness for various age groups. Considers socio-economic, ethnic and religious factors related to diet. Emphasizes the role of the practical nurse in assisting patients in meeting nutrition needs.

PNU 105 Introduction to Clinical Nursing

3 Credits

Provides students with opportunities to implement basic nursing skills in the clinical setting. Emphasizes the hygienic and comfort needs of the adult patient and focuses on developing basic assessment skills utilizing the nursing process. Stresses concise, accurate documentation of assessment and care.

PNU 107 Cardiopulmonary Nursing

3 Credits

Utilizes the nursing process in understanding the pathophysiology and nursing care of patients with cardiovascular/ventilation needs. Emphasizes developing the nurse as a communicator and care giver with a holistic approach.

PNU 108 Endocrine/Genitourinary Nursing

3 Credits

Utilizes the nursing process in understanding the pathophysiology of hormonal imbalances and urinary elimination needs. Emphasizes developing the nurse as a communicator and care giver with a holistic approach, identifying community supports for patients and developing patient awareness of healthful lifestyles.

3 Credits

PNU 110 Introduction to Pharmacology for Practical Nursing

2 Credits

PNU 111 Pharmacology for Practical Nurses

2 Credits

PNU 112 Medical/Surgical Clinical Nursing I

3 Credits

PNU 113 Medical Surgical Clinical Nursing II

2 Credits

PNU 114 Nursing Issues & Trends

1 Credit

PNU 115 Gerontology

3 Credits

PNU 116 Geriatric Clinical Nursing

3 Credits

PNU 117 Maternal/Child Nursing

3 Credits

PNU 118 Maternal/Child Clinical Nursing

3 Credits

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PST 120 First Responder**4 Credits**

Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Addresses handling of victims of hazardous materials accidents. Covers CPR, including one and two rescuer, and adult, infant and child resuscitation.

PST 121 Industrial Safety and Loss Prevention**3 Credits**

Introduces occupational safety and health standards and codes with emphasis on applications of codes to typical work situations and MSDS requirements. Includes emergency first aid, safety protection, eye protection and chemicals handling. Covers employer and employee rights as well as violations, citations, penalties, variances, appeals and record keeping.

PST 220 Incident Management Systems**3 Credits**

Emphasizes the command and control of major department operations at an advanced level, linking operations and safety. Areas of study include incident management systems, pre-incident, size-up, command systems, sectoring functions, staging, safety officer, command post, communications, news media, and computer-aided resources. Utilizes simulated incidents requiring the applications of appropriate solutions.

PST 221 Design and Planning for Prevention and Protection**3 Credits**

Focuses on the needs and uses of the computer in public safety. Includes computer-aided dispatch, advanced levels of cameo, I-Chiefs, computer-aided design of equipment, generation of incident reports, application of computers for the budgetary process, computer-aided resource and materials, maintenance, test records of vehicles and the GIS program.

PST 222 Industrial Loss Prevention**3 Credits**

Provides the student with a comprehensive study of the Code of Federal Regulations 29-1910. Covers the General Industry Standards Subparts A to Subparts R. Includes the responsibility of a safety department within industry and the emphasis placed on the Code of Federal Regulations. Emphasizes the need for proper record keeping and reporting to the Indiana Occupational Safety and Health Administration. Focuses on safety and the steps needed to administer a quality program.

PST 281-293 Special Topics in Public Safety**1-5 Credits**

Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

QSC 101 Quality Control Concepts and Techniques I**3 Credits**

Covers current quality control concepts and techniques in industry with emphasis on modern manufacturing requirements.

QSC 102 Statistical Process Control**3 Credits**

Studies the fundamental tools of statistical process control which are used in industry to reduce costs and increase productivity at a predictable quality level. Emphasizes principles and techniques of statistical process control to ensure that prevention instead of detection of problems is practiced. Includes basic statistical and probability theory, sampling techniques, process control charts, the nature of variation, histograms and attribute and variable charts.

QSC 201 Advanced Statistical Process Control**3 Credits**

Builds on the basic principles of QSC 102 with advanced techniques by industry to ensure economic production of goods based on defect prevention rather than defect detection. Covers the various decisions to modify, change or adjust processes based on statistical evidence. Stresses interpretation of statistical data and distinguishing between common and special causes of problems. Emphasizes appropriate use of control charts, trend analysis, assessing process and machine capability, evaluating the measurement process, using computers, and automated data collection systems and implementation techniques.

QSC 202 Quality Control Concepts and Techniques II
3 Credits

Continues QSC 101. Acquaints students with quality control systems. Emphasizes the systems approach to quality, establishing the quality system and applying total quality control in the company.

QSC 203 Metrology
3 Credits

Covers techniques of linear and angular measurement and applications for industrial processes and quality control.

QSC 204 Total Quality Management
3 Credits

Teaches the philosophy of total quality management. Focuses on improving processes and reducing variation in systems. Covers management's role in improving aspects of manufacturing and service organizations to achieve quality improvement.

RAD 101 Orientation and Nursing in Radiologic Technology
3 Credits

Covers seven units. Introduces radiology and prepares students for entry into a clinical setting.

RAD 102 Principles of Radiographic Exposure
4 Credits

Presents individual and group characteristics needed to produce the ideal radiograph. Includes knowledge of interchangeability of mAs, kVp, film/screen combinations, distance and grids. Covers factors and considerations needed for pediatric techniques, calibration, heat unit calculation and technique chart construction.

RAD 103 Radiographic Positioning I
3 Credits

Correlates positioning, terminology, techniques and film critique with the examinations of chest, abdomen, upper extremity, upper/lower GI tracts and urinary tract.

RAD 104 X-Ray Clinical Education I
5 Credits

Follows category 2 of the competency lab model, which tests proficiency of skills from categories 1 and 2. Includes supervised clinical experience.

RAD 105 Radiographic Positioning II
3 Credits

Correlates all previous material related to anatomy and positioning, covers the areas of lower extremities, spine and thorax, and advances knowledge in ethics and quality assurance.

RAD 106 X-Ray Clinical Education II
5 Credits

Includes supervised clinical experience, utilizes category 2 of the competency model, tests proficiency of skills from categories 1 and 2.

RAD 107 Radiation Physics
3 Credits

Introduces physics as utilized in the production of X-rays. Includes laws of physics pertaining to atomic structure, chemical properties and reactions and electrical circuitry. Covers equipment and methods of generation and measurement of electricity.

RAD 108 Radiographic Quality Assurance
2 Credits

Presents theories and practices pertaining to the establishment of department exposure standards. Includes equipment tests for reliability, problem solving, reject analysis and cost containment. Provides hands-on experience in processor monitoring, record keeping and radiographic quality control tests.

RAD 109 Imaging Techniques

2 Credits

Covers theories, principles and demonstrations of current imaging modalities.

RAD 110 Technical Math for Health Occupations

3 Credits

Provides basic instruction in technical mathematics for students in health occupations. Includes review of arithmetic, basic concepts of algebra, graphing, geometry and logarithms.

RAD 201 Radiographic Positioning III

3 Credits

This course correlates positioning terminology and techniques, film critique, with exams of Category 2 of the competency model, testing skills from Category I and II.

RAD 202 X-Ray Clinical Education III

8 Credits

Introduces Category 3 of the Competency Model, proficiency testing over Categories 1 and 2 and testing over Category 3.

RAD 203 X-Ray Clinical Education IV

8 Credits

Introduces Category 4 of the Competency Model in lab proficiency testing of skills from Categories 1, 2, 3 and proficiency in Category 4.

RAD 204 X-Ray Clinical Education V

8 Credits

Includes final competency testing for students who have not completed clinicals 1-4. Continues maintenance over all categories. Includes experienced clinical.

RAD 205 Pathology for Radiologic Technology

2 Credits

Examines basic concepts concerning disease, its causes and the resulting changes as viewed radiographically. Emphasizes needed technical changes to produce optimal radiographs from correlations to patient symptoms.

RAD 206 Radiobiology and Radiation Protection

3 Credits

Covers theories and principles of the effects of ionizing radiation upon living tissues. Includes dosages, measurements, DNA structure and function and cellular radio sensitivity.

RAD 208 Principles of Radiographic Exposure II and Quality Assurance

2 Credits

Continues Principles of Radiographic Exposure I. Explains photo timing and its relationship to manual techniques. Associates kVp and mAs with the quality and quantity of radiation. Covers standard darkroom procedure, automatic processing and quality assurance.

RAD 209 Radiographic Positioning IV

2 Credits

Covers all positions involving radiographic examinations.

RAD 288 Pharmacology and Routes of Administration for Radiologic Technologists

3 Credits

Surveys common pharmacologic agents, including emergency drugs, contrast media, measurements, dosages, actions, contraindications, allergic reactions and routes of administration.

RAD 299 General Exam Review**3 Credits**

Reviews content of program, emphasizing anatomy, physics, exposure principles, positioning and radiation safety. Simulated Registry exams prepare the student for the American Registry of Radiologic Technologist Examination.

RES 101 Respiratory Care Science 1**3 Credits**

Presents a history of respiratory care, principles/practices of oxygen administration, equipment cleaning and sterilization techniques, and gas analyzers. Includes patient care needs, asepsis, body mechanics, physical assessment, isolation techniques, medical terminology and medical records. Emphasizes safety. Presents basic principles of physics as applied in respiratory care.

RES 102 Respiratory Care Science 2**3 Credits**

Presents principles and practices of oxygen administration, gas blenders, humidity and aerosol therapies and environmental therapy. Introduces manual resuscitators, maintenance of artificial airways, hyperinflation and addresses selected aspects of ethical practice.

RES 103 Respiratory Care Science 3**3 Credits**

Studies medicinal aerosol therapy and respiratory pharmacology, hyperinflation therapies, pulmonary rehabilitation and home care. Introduces basic bedside pulmonary function testing. Presents aspects of ethical and legal respiratory practices.

RES 104 Critical Care I**3 Credits**

Introduces respiratory care of critically ill patients. Studies arterial blood gas collection, analysis and interpretation, and basic medical laboratory data. Introduces concepts and techniques of critical respiratory care of adults and pediatrics, including establishment and maintenance of artificial airways. Studies adult and pediatric mechanical ventilators and related cardiopulmonary monitoring equipment.

RES 105 Cardiopulmonary Physiology**3 Credits**

Studies the cardiopulmonary system including ventilation, perfusion and gas exchange; introduces arterial blood gases, acid base regulation and physiologic monitoring.

RES 106 Clinical Medicine**3 Credits**

Introduces etiology, symptomatology, diagnosis, therapeutics and prognosis of selected pulmonary diseases.

RES 108 Clinical Practicum 1**3 Credits**

Introduces the student to the hospital environment. Exposes students to various hospitals and respiratory care departments, patient charts, patient identification and communication within the hospital. Provides supervised experience in oxygen therapy, hyperinflation therapy, humidity/aerosol therapy and charting.

RES 109 Clinical Practicum 2**3 Credits**

Provides supervised experience in selected therapeutic modalities. Includes an introduction to chest physiotherapy, medicinal aerosol therapy, intermittent positive pressure breathing and ultrasonic therapy. Requires continuing certification in CPR.

RES 110 Clinical Practicum 3**3 Credits**

Provides additional supervised experience in selected therapeutic modalities. Includes an introduction to basic cardiopulmonary testing and mechanical ventilation. Requires certification in CPR.

RES 111 Clinical Practicum 4

3 Credits

Provides additional supervised experience in selected therapeutic modalities. Includes advanced patient assessment, clinical experience in adult critical care, arterial blood gas analysis and airway care. Requires continuing certification in CPR.

RES 112 Clinical Practicum 5

3 Credits

Provides additional supervised experience in selected therapeutic modalities. Includes advanced patient assessment, clinical experience in adult critical care, arterial blood gas analysis and airway care. Requires continuing certification in CPR.

RES 201 Respiratory Care Science 5

3 Credits

Includes in-depth approaches to the respiratory care management of critically ill neonatal, pediatric and adult patients. Emphasizes techniques of patient evaluation, monitoring, transportation and management.

RES 202 Respiratory Care Science 6

3 Credits

Covers advanced techniques of mechanical ventilation of neonatal, pediatric and adult patients. Includes advanced techniques of patient assessment through pulmonary function testing and other selected assessment techniques.

RES 203 Pathophysiology and Monitoring**3 Credits**

Includes etiology, symptomatology, diagnosis, therapeutics and prognosis of disease conditions related to respiratory care, including relationships of body systems. Covers various equipment, techniques of data collection, interpretation and evaluation of data used in monitoring the cardiopulmonary system.

RES 205 Clinical Practicum 6

3 Credits

Provides additional supervised experience in selected therapeutic modalities. Includes advanced cardiopulmonary diagnostic techniques, application of invasive and non-invasive monitoring of the cardiopulmonary system and experience in respiratory care departmental management and quality assurance roles. Also includes advanced clinical experience in adult, pediatric and neonatal critical care. Continuing certification in CPR is required.

RES 210 **Cardiopulmonary Diagnostics**

3 Credits

Emphasizes techniques of patient evaluation, cardiopulmonary monitoring, transportation and management. Includes advanced techniques of patient assessment through pulmonary function testing and other selected assessment techniques.

RES 211 Critical Care II

3 Credits

Presents advanced techniques of mechanical ventilation of the neonatal, pediatric and adult patient.

RES 215 Clinical Medicine II

3 Credits

Studies etiology, symptomatology, diagnosis, therapeutics and prognosis of disease conditions related to respiratory care and the relationships of body systems.

SPC 103 Employee Participation Techniques & Quality Improvements

3 Credits

Provides an overview of the development of an employee involvement program such as circle, team, group and other concepts. Includes problem-solving techniques of brainstorming, cause and effect diagrams, data gathering, check sheets, Pareto analysis, central location, frequency distribution and histograms. Covers the role of management and employees in the process and their relationship to participative management.

SPC 104 Introduction to Non-Destructive Testing**2 Credits**

Acquaints students with the principles and various types of non-destructive examination methods, their advantages, limitations and applications.

SPC 105 Non-Destructive Testing Applications I**2 Credits**

Presents an overview of the relationship of non-destructive testing to the total quality function. Includes advantages and limitations of various test methods.

SPC 106 Non-Destructive Testing Applications II**2 Credits**

Covers theoretical and practical aspects of non-destructive testing in radiography, eddy current testing, acoustic emission and leak testing.

SPC 108 Quality Control Engineering Principles and Technologies**3 Credits**

Presents principles and techniques of modern quality control engineering with attention to management, engineering, economic and production factors. Emphasizes the assurance of quality at the hardware, processing and system levels.

SPC 109 Engineering Materials**2 Credits**

Includes the basic principles of metallurgy and the properties of materials in the section of parts and manufacturing processes. Explores the ways in which the strength and hardness of metals can be altered by heating and cooling. Examines ceramics, composites, polymers and other exotic metals.

SPC 110 Quality Control Engineering Theory and Application**3 Credits**

Presents current theory and applications of quality engineering for assurance and verification of product quality at the hardware, processing and system levels. Emphasizes statistical analysis, laboratory experiments, and tests and case problem-solving applications.

SPC 111 Reliability Objectives**3 Credits**

Introduces the development and principles of reliability engineering. Establishes the mathematical and physical bases of reliability and applies the basic elements of reliability data analysis. Surveys concepts basic to modern reliability requirements with emphasis on practical applications in manufacturing processes and production operations.

SPC 112 Reliability Techniques**3 Credits**

Studies reliability techniques and applications designed to obtain or improve reliability analysis.

SPC 201 Analysis of Metallurgical Failure**3 Credits**

Study of the factors responsible for the failure of components or structures, which may be motivated by either sound engineering practice or by legal considerations. Covers the proper application of failure analysis techniques to provide valuable feedback to design problems and materials limitations.

SPC 202 Process Control Gauging and Measurements**3 Credits**

Deals with the science of measurement for obtaining accurate and reliable data using computerized statistical process control and mechanical metrology. Includes selection of various instruments for specific applications.

SPC 203 Codes, Specifications and Procedures Interpretations

3 Credits

Explores the different types of codes, specifications and procedures used in modern industry and provides opportunity for use and interpretation. Blueprint reading is included.

SPC 204 Statistical Concepts and Techniques

3 Credits

Presents various topics pertaining to statistical applications of quality control including frequency distribution, probability theory and application, and sampling techniques.

SPC 205 Nondestructive Testing

3 Credits

Presents an overview of the relationship of nondestructive testing to the total quality function. Attention is given to the advantages and limitations of various test methods.

SPC 206 Mechanical Metrology

3 Credits

Provides instruction and laboratory experiments in the use of mechanical testing and measurement equipment for quality control.

SPC 207 Electrical Metrology

3 Credits

Offers instruction and laboratory experiment in the use of electrical testing and measurement equipment for quality control.

SUP 102 Techniques of Supervision I

3 Credits

Introduces basic employee development with emphasis on the responsibilities of a newly-appointed supervisor. Emphasizes organizational structure, motivation, delegation of authority, interviews, orientation and induction of new employees, employee performance evaluations and dealing with employee conflict.

SUP 103 Industrial Safety I

3 Credits

Covers the day-to-day responsibilities of management and supervision toward attaining an accident-free organization. Emphasizes first aid, fire prevention and control, safety procedures in starting and stopping machines, accident investigations and other preventive measures. Covers methods of advertising good safety practices and rules of plant protection in relation to safety and OSHA.

SUP 104 Techniques of Supervision II

3 Credits

Develops skills for effective supervision of employees by utilizing analysis of cases, group discussion, in-basket exercises and role-playing.

SUP 202 Production Planning and Control

3 Credits

This course emphasizes production planning concepts and inventory control techniques and applications. Areas of concentration include the production function, design and development of products/services, inventory management and quality control.

SUP 203 Reliability Objectives

3 Credits

Introduces development and principles of reliability engineering. Establishes mathematical and physical bases of reliability and applies basic elements of reliability data analysis. Surveys concepts basic to modern reliability requirements with emphasis on practical applications in manufacturing processes and production operations.

SUP 204 Mechanical Metrology

3 Credits

Provides instruction and laboratory experiments in the use of mechanical testing and measurement equipment for quality control.

SUP 205 Techniques of Leadership

3 Credits

Identifies approaches to effective leadership and discovers an appropriate personal leadership style. Explores specific qualities and skills needed for conference leadership (organizing, facilitating, controlling, summarizing, speaking and problem defining and solving).

SUP 206 Time and Motion Study

3 Credits

Examines industrial applications of time and motion studies in establishing rates.

SUP 208 Materials Handling

3 Credits

Applied stresses and quality controls pertaining to the handling and storing of industrial materials. Gives attention to shelf life of materials, weight and mass configuration and specifications of vendors' materials.

SUP 210 Case Problems in Management

3 Credits

Applies quantitative and qualitative skills to case study problems in management. Presents solutions which demand planning, leadership and financial analysis.

SUP 211 Labor Relations

3 Credits

Examines labor laws and practices pertaining to industrial relations. Covers development and application of laws, mediation, conciliation, collective bargaining, arbitration and handling of grievances.

SUP 212 Manufacturing Organ I

3 Credits

Presents the organization of a typical manufacturing operation with attention to functional components and their interrelationships. Reviews organizational principles as they apply to the operation and examines the duties and responsibilities of the first-line supervisor. Develops the basic tools of managerial decision-making and applies them to typical case problems.

SUP 213 Manufacturing Organ II

3 Credits

Explores quality control, research, development, marketing, production, inventory control, personnel and maintenance functions. Involves forms of ownership, analysis of financial data, capital investment and budgeting.

SUP 214 Industrial Safety II

3 Credits

Establishes procedures following an accident. Covers the preparation and maintenance of accident records, severity rates, workers' compensation and insurance claims. Shows how effective safety programs are managed in compliance with the law and contractual agreements.

SUP 215 Purchase and Inventory Control

3 Credits

Discusses a practical approach to procurement of materials with regard to price, quality, quantity. Examines the purchasing department's place in the organizational structure. Defines responsibility of the purchasing department and its relationship to other departments, legal aspects, ethics and standards as they relate to procurement.

3 Credits

Covers transportation systems, federal regulations, freight classification, rates, tariffs and claims.

3 Credits

Studies the efficient production of goods and services that will satisfy the wants and needs of identified customer groups. Focuses on the acquisition of the factors of production, efficient use of those factors and distribution of the output of the production process. Includes discussion of the need for quality and its measurement.

3 Credits

Introduces principles of sterile techniques and the operative care of the surgical patient. Includes the roles of scrubbing and circulating duties.

3 Credits

Provides orientation to the role of a surgical technologist. Introduces the surgical facility, aseptic technique and basic surgical procedures with review of total patient care, including pre-operative care, diagnostic test and immediate post-operative care.

6 Credits

Demonstrates and supervises practice of general surgical procedures. Correlates theory to clinical by requiring students to actively participate as members of the surgical team. Includes laboratory and clinical experiences.

6 Credits

Studies advanced surgical procedures in relation to the total physiological aspects of surgical intervention. Includes a knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure and a review of total patient care.

9 Credits

Correlates basic principles and theories of advanced surgical procedures to clinical performance in affiliating hospitals. Includes knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

3 Credits

Studies specialized surgical procedures. Includes a knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure and a review of total patient care.

8 Credits

Correlates principles and theories of specialized surgical procedures to the clinical performance in affiliating hospitals. Includes the knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

3 Credits

Provides a basic survey of manufacturing processes, tools and equipment used by modern industry to convert bars, forgings, castings, plates and sheet materials into finished products. Includes basic mechanics of materials removal and forming, metrology, quality control and safety of operations. Introduces non-traditional manufacturing techniques.

TEC 102 Technical Graphics**3 Credits**

Strengthens basic drafting skills to a proficient technician level. Includes orthographics projections with auxiliary views, dimensioning, sectioning and introductory tolerancing. Studies isometric and oblique views of parts.

TEC 104 Computer Fundamentals for Technology**3 Credits**

Provides an introduction to microcomputer hardware, applications and software. Emphasizes computer literacy, disk operating systems (DOS), computer programming and industrial orientation. Surveys commonly used microcomputer applications. Pre-requisite BSA 032, pre or co-requisite BSA 025.

TEC 106 Hazardous Materials and Control**3 Credits**

Introduces hazardous materials, managing hazardous material incidents, explosive and gas emergencies, shipping containers, cylinder safety devices, responding to flammable and combustible liquids, oxidizers, poisons and corrosive and radioactive emergencies. Emphasizes chemical identification, marking, storage, shipping and handling hazardous substances. Uses basic monitoring instruments for hazardous areas to protect workers and first responders. Covers protective clothing and equipment. Emphasizes safety.

TEC 113 Basic Electricity**3 Credits**

Studies electrical laws and principles pertaining to DC and AC circuits. Includes current, voltage, resistance, power, inductance, capacitance and transformers. Stresses the use of standard electrical tests, electrical equipment and troubleshooting procedures. Emphasizes safety procedures and practices. Pre-requisite or co-requisite BSA 050.

WLD 108 Shielded Metal Arc Welding I**3 Credits**

Provides students with knowledge of shielded metal arc welding operations and equipment. Provides extensive practice time to produce the skills to make satisfactory welds with this process. Emphasizes safety hazards and safety practices in arc welding.

WLD 109 Oxy-Acetylene Gas Welding and Cutting**3 Credits**

Offers basic instruction in oxy-acetylene welding with emphasis on welding techniques in flat, horizontal, vertical and overhead positions. Includes brazing and flame cutting. Focuses on safety hazards and safe practices in oxy-acetylene welding and cutting.

WLD 110 Welding Fabrication I**3 Credits**

Provides opportunities for practice in hands-on fabrication of welded products. Includes basic equipment used in fabrication.

WLD 120 Metallurgy Fundamentals**3 Credits**

Studies properties and uses of ferrous and nonferrous metals and alloys, production of iron and steel, composition and properties of plain carbon steel and alloying elements, selection of tools, case hardening and destructive and nondestructive testing. Includes fundamentals of heat treatment and reactions occurring in metals subjected to various heat treatment methods and techniques.

WLD 201 Special Welding Processes**3 Credits**

Welding practice with various welding processes and techniques using advanced welding methods, machines and equipment. Presents advanced arc welding with emphasis on use and orientation of submerged arc welding equipment.

WLD 203 Pipe Welding I

3 Credits

Provides for extensive practice in the preparation and welding of pipe in the 2G & 5G position. Includes preparation, methods of welding, electrodes and filler wires.

WLD 206 Shielded Metal Arc Welding II

3 Credits

Covers SMAW welding equipment and products used to produce groove type butt welds. Provides extensive practice to develop the skills to achieve satisfactory welds of this type. Safety hazards and safe practices in arc welding are emphasized.

WLD 207 Gas Metal Arc (MIG) Welding

3 Credits

Considers various gas metal arc welding (GMAW) processes including microwire, flux-core, innershield and submerged arc with emphasis on metal inert gas welding. Includes techniques of welding in all positions on various thicknesses of metal.

WLD 208 Gas Tungsten Arc (TIG) Welding

3 Credits

Provides students with thorough knowledge of the gas tungsten arc welding process. Includes detailed study of the techniques of making welds in all positions using the GTAW applications. Lectures and discussions provide additional background information essential to a qualified GTAW welder.

WLD 209 Welding Certification

3 Credits

Prepares the student for certification in shielded arc, TIG, and MIG welding through study of the qualifications, procedures and equipment standards. Includes a survey of qualifying agencies, associations and societies.

WLD 210 Welding Fabrication II

3 Credits

This course provides for practice in hands-on fabrication and the use of related equipment will be taught.

Full-Time Faculty

Technology

Duane Alfrey

Senior Instructor (Welding Technology). Certification: American Welding Society, Certified Senior Industrial Technologist - NAIT.

Huey Calvin

Senior Instructor (Welding Technology). Certification NOTCI (National Occupational Testing Competency Institute), American Welding Society and Certified Senior Industrial Technologist - NAIT.

Edwin David Carlton

Instructor (CNC Technology). CNC, Indiana Vocational Technical College, Certified Senior Industrial Technologist - NAIT.

Michael DeBourbon

Master Instructor (Department Chairperson, Industrial Manufacturing Technologies). M.S., Indiana University; B.S., Southern Illinois University.

Byron Ewers

Instructor (Transportation Service Technology). A.S.E. - Certified Master Technician

Ronald Finney

Instructor (Chairperson, Transportation Service Technology). B.S., Indiana University; ASE - Certified Master Technician; and Certified Senior Industrial Technologist - NAIT.

William T. Flanigan

Instructor (Chairperson, Industrial Technologies Technologies). M.S., Indiana Wesleyan University; B.S., Tri-State University, and Certified Senior Industrial Technologist - NAIT.

Michael Hall

Instructor (Chairperson, Automated Manufacturing Technology). M.S., Purdue University; B.S., Purdue University; Licensed Professional Engineer.

Larry E. Hoskins

Instructor (Chairperson, Applied Fire Science). B.S., Southern Illinois University; A.A.S., Indiana Vocational Technical College; Master Firefighter in Tactics, Management Arson Investigations, Fire Prevention, Aircraft Rescue, and Fire Protection Engineering.

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Vernon Huddleson

Instructor (Transportation Service Technology). B.S., Martin University; A.A.S., Indiana Vocational Technical College; A.S.E.- Certified Senior Industrial Technologist - NAIT; A.S.E.-Certified Master Technician.

Instructor (Heating, Air Conditioning and Refrigeration Technology). A.A.S., Indiana Vocational Technical College.

Master Instructor (Coordinator, Quality Control Specialty). M.S., Indiana University; A.B., Indiana University; Certificate in Meteorology, St. Louis University .

Senior Instructor (Electronics Technology). M.S., Indiana University; B.S., Purdue University; A.A.S., Purdue University; Certified Senior Industrial Technologist (NAIT).

Master Instructor (Electronics Technology). M.S., Indiana State University; B.S., Purdue University.

Instructor (Heating, Air Conditioning and Refrigeration Technology); B.S., Martin University.

Instructor (Chairperson, Electronics Technology). M.S.E.E., Purdue University; B.S.E.E., University of Iowa.

Instructor (Industrial Maintenance Specialty). M.S., Indiana State University; B.S., Indiana State University.

Instructor (Industrial Maintenance). M.S., Industrial Engineering, Iowa State University; B.S., Purdue University; and Certified Senior Industrial Technologist - NAIT.

Instructor (Electronics Technology). J.D.; Indiana University; B.A. - BOG., Eastern Illinois University; Certified Senior Industrial Technologist (NAIT).

Instructor (Design Technology). B.S., Indiana State University; and Certified Senior Industrial Technologist - NAIT.

Instructor (Design Technology). B.S., Purdue University.

Instructor (Automotive Body Repair). A.S.E. - Certified Paint and Body Technician, I-CAR Certified Technician.

Instructor (Heating, Air Conditioning, and Refrigeration Technology). B.A., Marian College.

Program Coordinator, Graphics Training Center; B.S.M.E., Purdue University

Instructor (Design Technology). B.S., Purdue University.

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